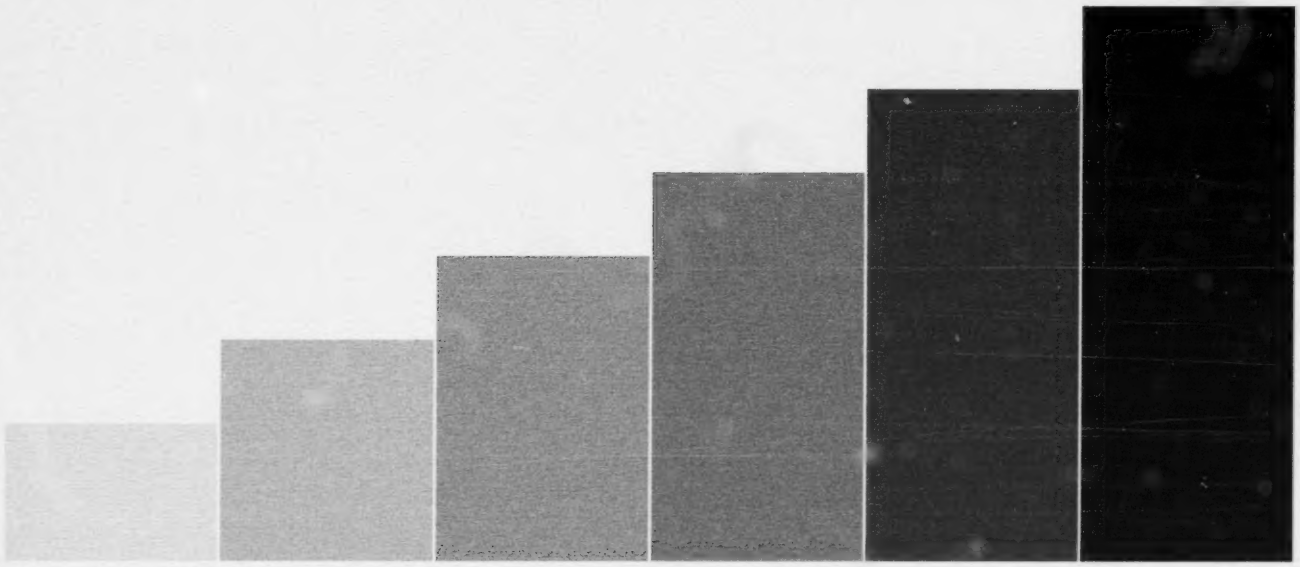

Annual Statistics

2015 - 2016

Manitoba Health, Seniors and Active Living

Information Management and Analytics

Manitoba

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Preface

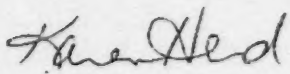
Manitoba Health, Seniors and Active Living's *Annual Statistics* report is designed for a broad audience that includes health professionals, researchers, policymakers and the general public. This report describes Manitoba's population, health utilization and health status using key health indicators measured both over time and for the most recently available fiscal or calendar year.

Manitoba's health care system is a broad network of services and programs. Overseeing this system is Manitoba Health, Seniors and Active Living, a department of the provincial government. Primarily, services are delivered through regional health authorities—five regional agencies set up by the province to meet the local needs of Manitobans—Winnipeg RHA, Southern Health-Santé Sud, Interlake-Eastern RHA, Prairie Mountain Health and Northern Health Region.

In Manitoba, the regional health authorities are responsible, within the context of broad provincial policy direction, for assessing and prioritizing needs and health goals, and developing and managing health services in their region.

Any inquiries pertaining to this publication generally or in reference to specific indicators should be addressed to:

Information Management and Analytics Branch
Manitoba Health, Seniors and Active Living
Room 4044
300 Carlton Street
Winnipeg, Manitoba R3B 3M9
Phone: (204) 786-7229



Karen Herd
Deputy Minister
Manitoba Health, Seniors and Active Living

How to Use This Report

The Manitoba Health, Seniors and Active Living *Annual Statistics* report is a descriptive report comprised of thirteen sections. The report looks at the distribution of the population, mortality, disease and injury, prevalence of mental illness, physician and hospital services, use of home care and personal care homes, preventative services and prescription drug use. Unless otherwise stated, indicators in this report are population-based rather than service-based. In other words, the indicators reflect where people live, not where they received services.

For most indicators the report provides a rate by RHA and then a more in-depth look or **"Highlight"** at the Manitoba level. For some indicators, the data is only presented at the Manitoba level. The majority of the indicators report data for the 2015/2016 fiscal year. Where most recent data was not available, the prior year was used. However, in some instances due to small numbers, multiple years had to be combined to ensure confidentiality and to achieve stable rates. For more information on how the indicators were calculated and defined please refer to the glossary.

Indicators found in this report show similar trends to indicators found in other public documents. However, exact rates in this report cannot be directly compared due to different inclusion and exclusion criteria.

The report provides descriptive analyses of indicators, not explanatory. Indicators are produced using administrative data, which does not include information on context, history or local circumstances. The information in this report should be used in conjunction with information from other sources so that regional and provincial planners and decision-makers can make well-informed decisions.

Important Notes and Data Cautions

Throughout the report, the RHAs are shown in a particular order based on their overall health status as measured by the premature mortality rate (PMR). PMR was calculated for the RHAs by the Manitoba Centre for Health Policy for the RHA Indicators Atlas 2013[1]. A death before the age of 75 is considered to be premature; therefore the PMR is the average annual rate of deaths before the age of 75, per 1,000 residents under 75. The RHA with the lowest PMR (best overall health status) appears at the top of the graph. The RHA with the highest PMR (poorest overall health status) appears at the bottom of the graph.

Two types of rates are presented in this report: crude rates and adjusted rates.

Crude rates:

- A crude rate is the expression of the frequency of an event in a defined population in a defined period of time. It is calculated by dividing the number of observations by the suitable population and multiplying by an appropriate multiplier (such as 100 to create a percentage). Although crude rates do not take differences in population structure into account they are vital for policy and programming as they represent the actual rate in a given population.

Adjusted Rates:

- The adjustment of rates is a statistical process that makes groups such as those in particular geographic areas comparable by removing the effects of demographic differences such as age and gender distribution. Essentially, adjusted rates tell us what the rates would be if each geographic area had the same age and sex distribution. Therefore, adjusted rates are fictional rates which use statistical models to remove the effects of age and sex differences to allow for comparisons across populations.

  Accordingly, while adjusted rates have been statistically modelled to be comparable to each other, they should be considered fictional in the sense that they do not measure anything directly. Please note that these adjusted rates cannot be compared to other rates which have not received the same adjustment.

Statistical Testing:

Statistical testing was performed to determine whether regional rates were statistically significantly different from the Manitoba rate for each time period. If a difference was statistically different, then we are 99% confident that this difference is not just due to chance.

Please note the following data cautions when reading the graphs:

(*) Indicates that the region is statistically different from Manitoba.
(!) Indicates that the regional rate should be used with caution due to small numbers.
(-) Indicates that the regional rate is suppressed because the numerator contains a small number of individuals which could potentially be identified.
(..) Indicates that there was no data for this time period.

1. Fransoo R, Martens P, Burland E, The Need to Know Team, Prior H, Burchill C. Manitoba RHA Indicators Atlas 2013. Winnipeg, MB: Manitoba Centre for Health Policy, October 2013.

Additional Publications to Consider

While this report has attempted to provide an overview of statistics from across the health care system, it is by no means exhaustive.

For more detailed information on cancer incidence and mortality, please refer to the following link from CancerCare Manitoba:
http://www.cancercare.mb.ca/resource/File/Epi-Cancer_Registry/CCMB_CHA_Report-2014.pdf

The regional health authorities also provide statistics in the comprehensive Community Health Assessments which are conducted every five years. The reports for each of the RHAs can be found at:

Interlake-Eastern RHA
http://www.ierha.ca/data/2/rec_docs/20654_2014CommunityHealthAssessment-Interlake-EasternRHA.pdf

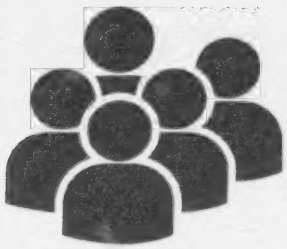
Northern Health Region
http://www.northernhealthregion.ca/data/1/rec_docs/1083_NHR_2014_CHA_Report.pdf

Southern Health-Santé Sud
http://www.southernhealth.ca/cha.php?lang=en&

Prairie Mountain Health
http://www.prairiemountainhealth.ca/images/Community_Health_Assessment.pdf

Winnipeg RHA
http://www.wrha.mb.ca/research/cha2014/files/CHAReport2014.pdf

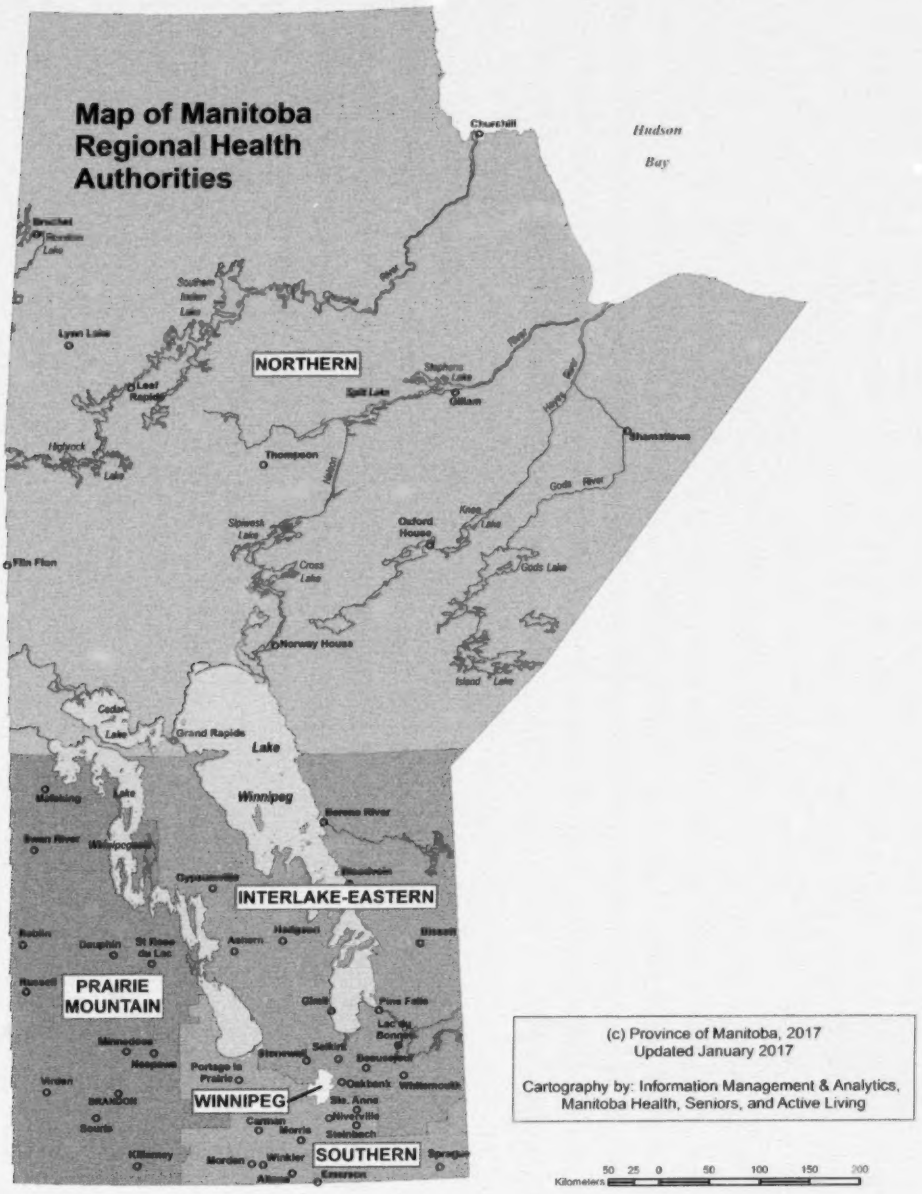
Demographics



The following section provides an overview of the demographics of the population of Manitoba. This includes population distribution and size, pregnancies, births and deaths.

As of June 1, 2015 Manitoba had a population of 1,320,343 residents. There were a total of 19,832 pregnancies in 2015/2016.

There were 16,469 babies born in 2014/2015. In the same time period, 10,779 Manitobans died, with the majority of these deaths being due to circulatory disease and cancer.


Map of Manitoba
Regional Health
Authorities
Churchill
Hudson
Bay
NORTHERN
Lynn Lake
Leaf
Rapids
Split Lake
Gillam
Thompson
Shamattawa
Oxford
House
Gods Lake
Norway House
Cross
Lake
Grand Rapids
Lake
Winnipeg
INTERLAKE-EASTERN
PRAIRIE
MOUNTAIN
WINNIPEG
SOUTHERN
Dauphin
Portage la
Prairie
Brandon
Morden
Winkler
Emerson
(c) Province of Manitoba, 2017
Updated January 2017
Cartography by: Information Management & Analytics,
Manitoba Health, Seniors, and Active Living
50 25 0 50 100 150 200
Kilometers

Population Pyramids

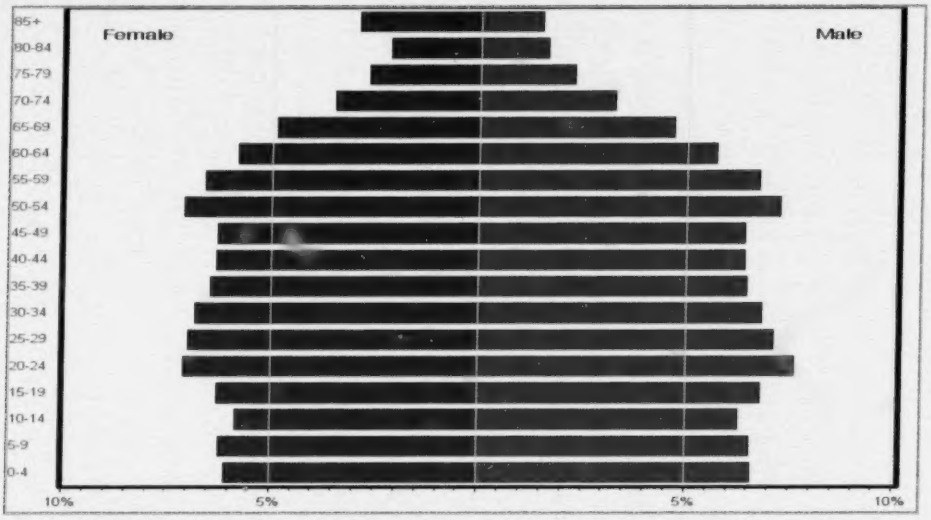


Figure 1: Population pyramid for Manitoba as of June 1, 2015

Figure 1 shows the age and sex composition of the Manitoba population, based on records of residents registered with Manitoba Health, Seniors and Active Living on June 1, 2015. The percentage of the population within each particular age group is shown for males and females. As of June 1, 2015, the total population of Manitoba was 1,320,343 residents, of which 50% were male and 50% were female. In the population pyramid above two distinct bulges can be seen. One represents those in their fifties, and the second represents those in their twenties.

Figure 2 shows the age and sex composition of Manitoba First Nations people based on records of self-reported First Nations residents registered with Manitoba Health, Seniors and Active Living on June 1, 2015. First Nations people in Manitoba are a much younger population. Of the 99,536 people who declared their First Nations status to Manitoba Health, Seniors and Active Living 55% were under the age of 25, compared to only 33% for the Manitoba population overall.

For more information on Manitoba's population, please refer to the Manitoba Health, Seniors and Active Living's Population Report at http://www.gov.mb.ca/health/population/index.html.

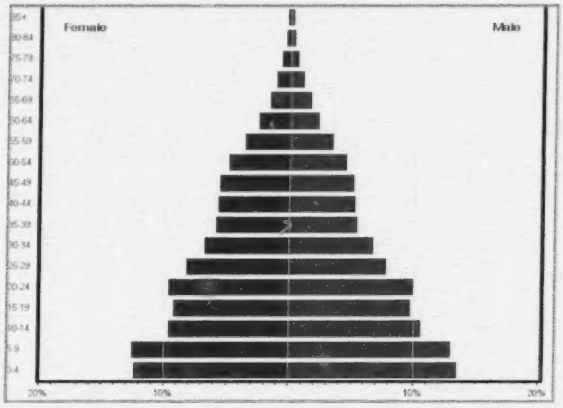


Figure 2: Population pyramid for Manitoba First Nations people as of June 1, 2015

Pregnancy

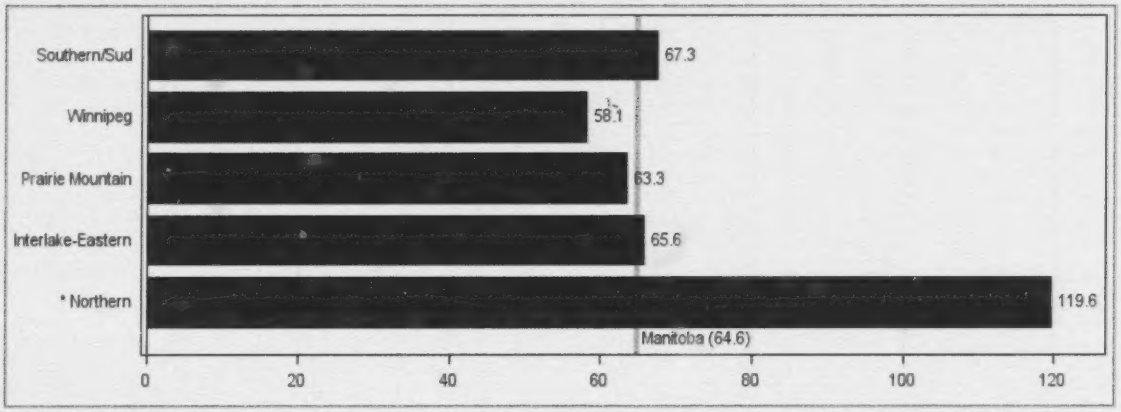


Figure 3: Age-adjusted rate of pregnancies per 1,000 female residents ages 15 to 49 by RHA, 2015/2016

Figure 3 shows the age-adjusted rate of pregnancies for Manitoba women ages 15 to 49 by RHA of residence. Pregnancies include all live births, stillbirths, abortions and ectopic pregnancies.

In 2015/2016, there were a total of 19,832 pregnancies among Manitoba women ages 15 to 49, representing a rate of 64.6 pregnancies per 1,000 women in the same age group.

Northern Health Region had a significantly higher age-adjusted pregnancy rate which is 85% higher than for Manitoba overall.

The majority of pregnancies in Manitoba were among women ages 20 to 34, with 76.6% of pregnancies represented by women in this age group (Figure 4).

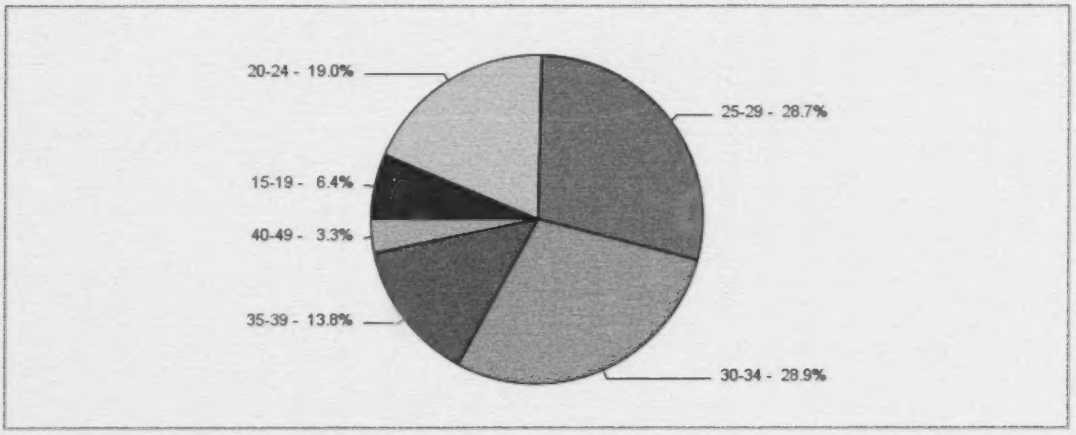


Figure 4: Percentage of total pregnancies by age group, 2015/2016

Births

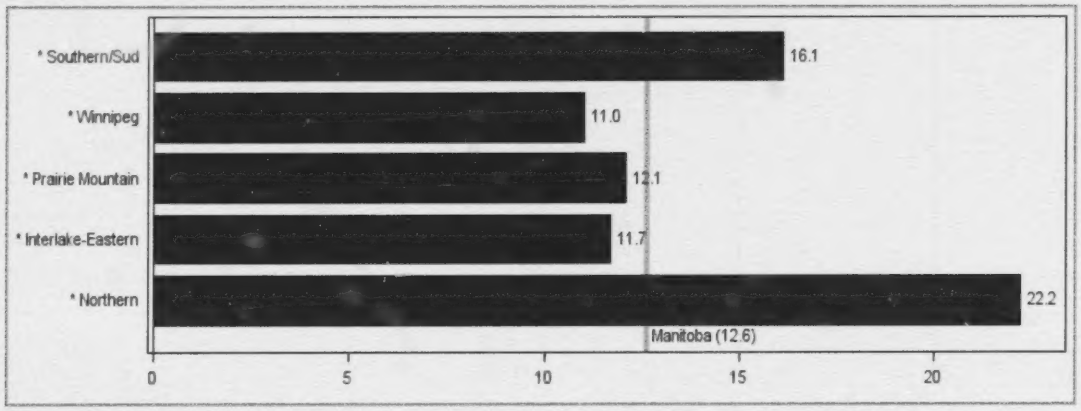


Figure 5: Crude rate of total births per 1,000 residents by RHA of residence, 2014/2015

Figure 5 shows the crude number of live births by RHA of residence, per 1,000 population.

In 2014/2015, there were 16,469 babies born to Manitoba residents, representing a rate of 12.6 newborns per 1,000 population. Rates varied significantly across the province, ranging from a high of 22.2 births in Northern Health Region to a low of 11.0 births in Winnipeg RHA.

The majority of babies born in Manitoba had a weight that was appropriate-for-gestational-age with 78% of newborns within this group (Figure 6). Of the remaining newborns, 12% were large-for-gestational-age and 9% were small-for-gestational-age.

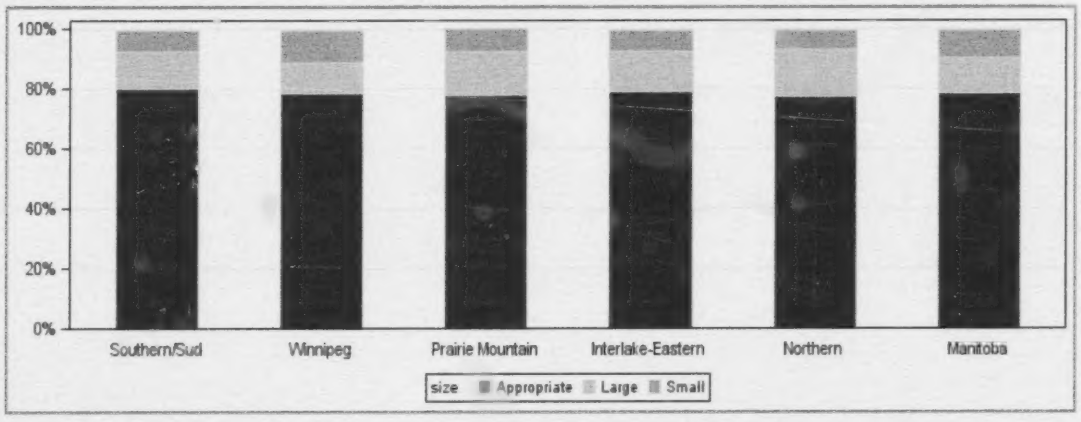


Figure 6: Percentage of total live births by size for gestational age, 2014/2015

Deaths

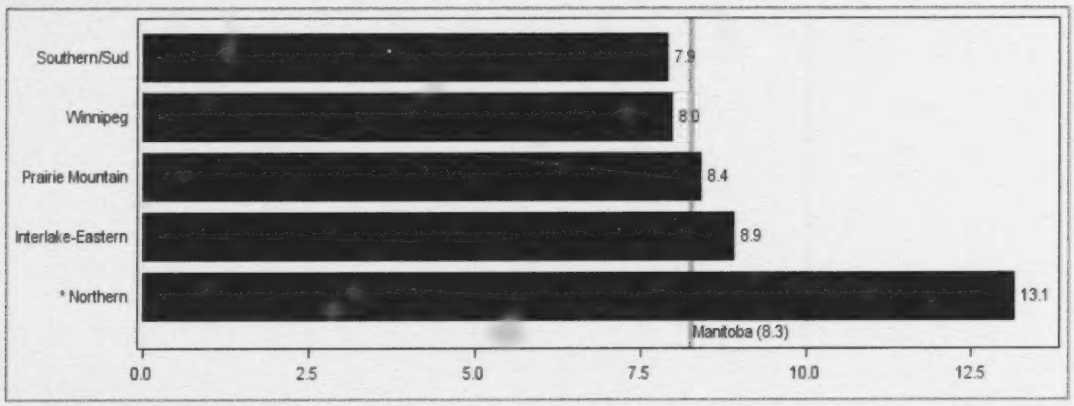


Figure 7: Age- and sex-adjusted rate of death per 1,000 residents by RHA, 2014/2015

Figure 7 shows the age- and sex-adjusted death rate per 1,000 population by region of residence.

In 2014/2015, 10,779 Manitoba residents died, representing a rate of 8.3 deaths per 1,000 population. The age-and sex-adjusted death rate in Northern Health Region was significantly higher than Manitoba overall.

In Manitoba overall, the five most common causes of death were:

1) circulatory disease (28.5%)
2) cancer (27.0%)
3) respiratory disease (9.3%)
4) mental/behavioural (7.8%)
5) injuries (7.1%)

These above causes represented 79.7% of all deaths (Figure 8).

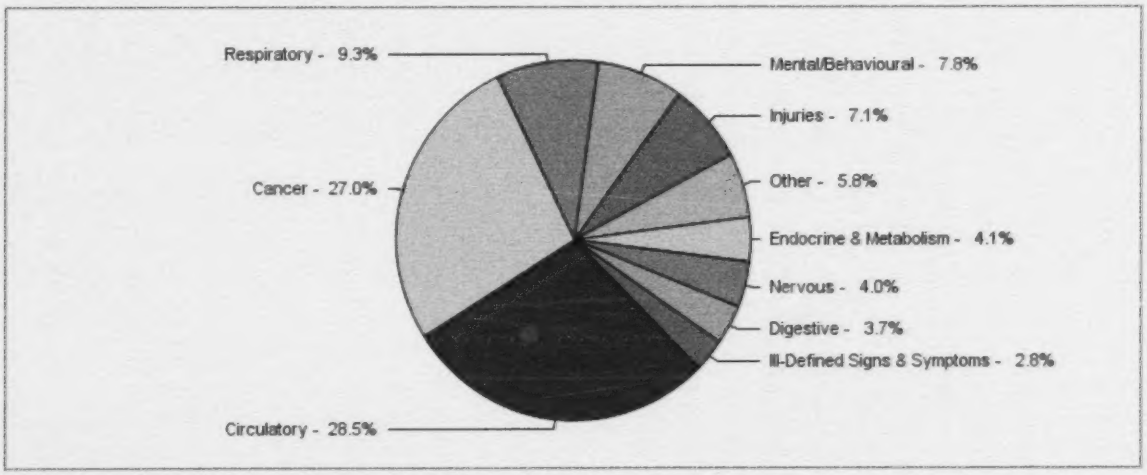
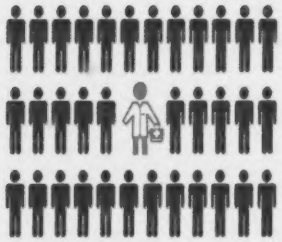


Figure 8: Percentage of deaths by cause, 2014/2015



Population Health Status and Mortality

The following section provides an overview of population health status and mortality within Manitoba. This includes premature mortality rates, infant mortality rates and child mortality rates.

From 2010/2011 to 2014/2015 an average of 3,745 Manitoba residents died each year before the age of 75. For the same time period there was an annual average of about 92 infant deaths and 94 deaths of children between the ages of 1 and 19. The rate of death for male children remained consistently higher than female children.

Premature Mortality

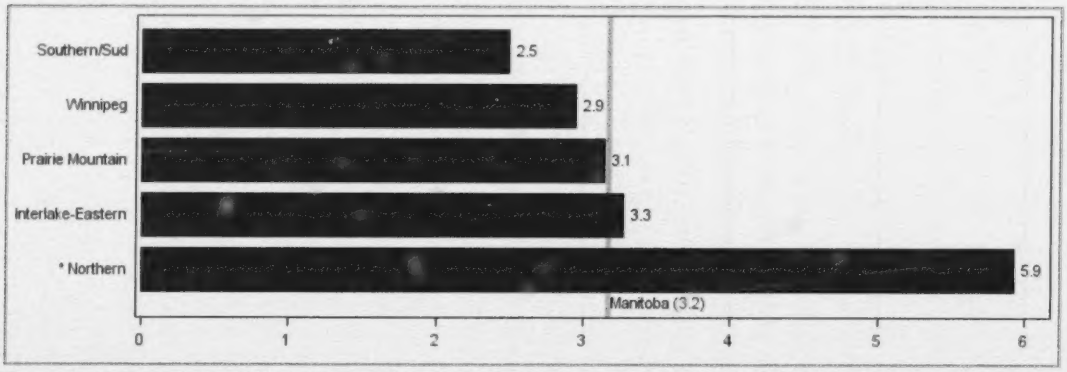


Figure 9: Age- and sex-adjusted rate of premature death per 1,000 residents under the age of 75 by RHA, 2010/2011 to 2014/2015

Figure 9 shows the age- and sex-adjusted premature mortality rate (PMR). Premature mortality is defined as death before the age of 75. PMR is used as an indicator of general health of a population; a higher PMR indicates poorer health status.

On average, there were 3,745 Manitoba residents that died before the age of 75, representing a rate of 3.2 deaths per 1,000 residents. The premature mortality rate in Northern Health Region was significantly higher than in Manitoba overall.

Infant Mortality

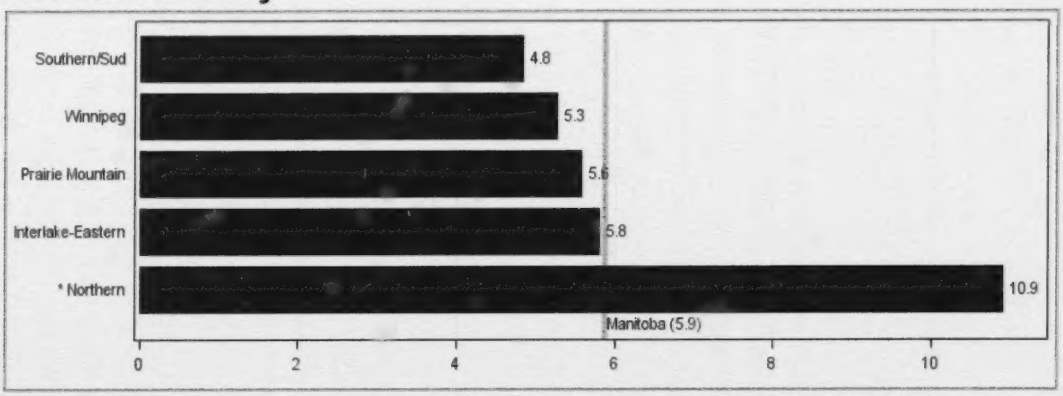


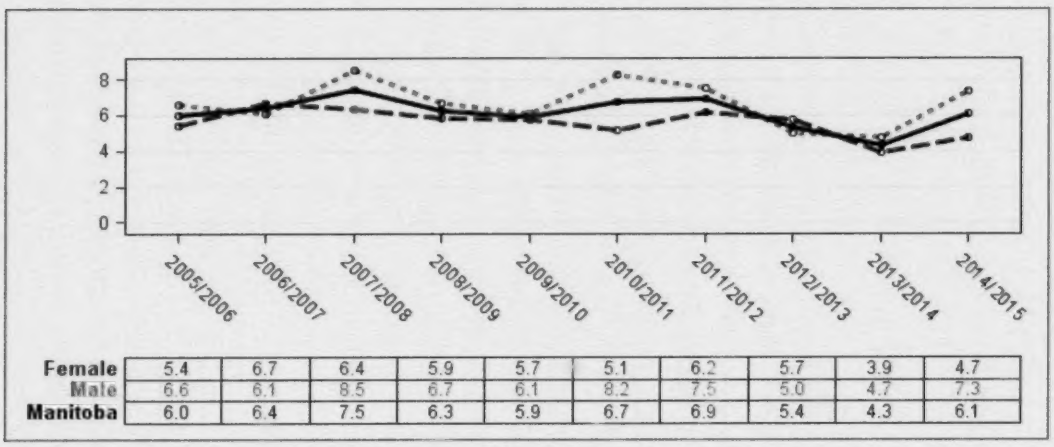
Figure 10: Crude rate of infant death per 1,000 infants by RHA, 2010/2011 to 2014/2015

Figure 10 shows the crude rate of infant death by RHA of residence. Infants are defined as individuals less than one year of age. Infant mortality is seen as an indicator of health status, level of health care in area and effectiveness of prenatal care.

From 2010/2011 to 2014/2015, there were 462 deaths among Manitoba infants, representing a rate of 5.9 deaths per 1,000 infants. The infant mortality rate in Northern Health Region was significantly higher than Manitoba overall.

Figure 11 shows the infant mortality rate in Manitoba over time. The overall infant mortality rate in Manitoba appeared to be relatively stable over time, with the mortality rate in males being generally higher than that of females.

♦ As new information becomes available slight deviations from previous reports may be present.



	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015
Female	5.4	6.7	6.4	5.9	5.7	5.1	6.2	5.7	3.9	4.7
Male	6.6	6.1	8.5	6.7	6.1	8.2	7.5	5.0	4.7	7.3
Manitoba	6.0	6.4	7.5	6.3	5.9	6.7	6.9	5.4	4.3	6.1

Figure 11: Crude rate of infant death per 1,000 infants by fiscal year

Child Mortality

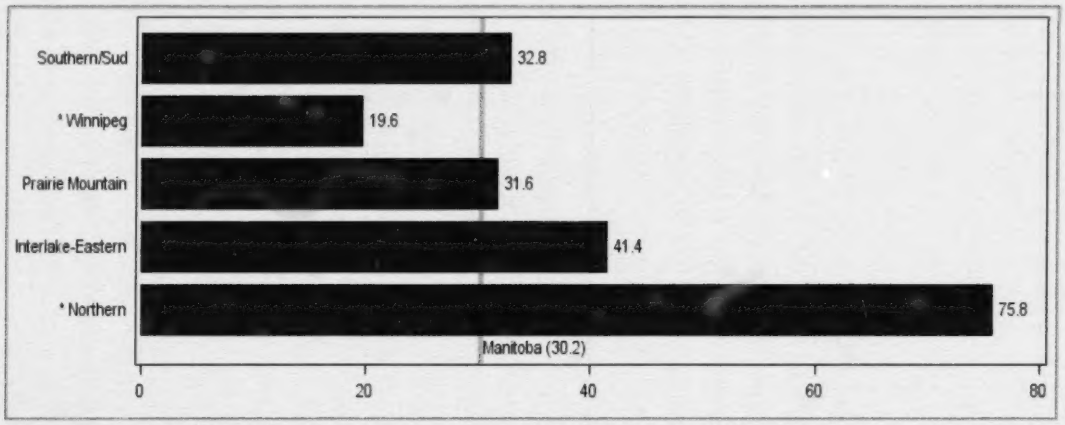
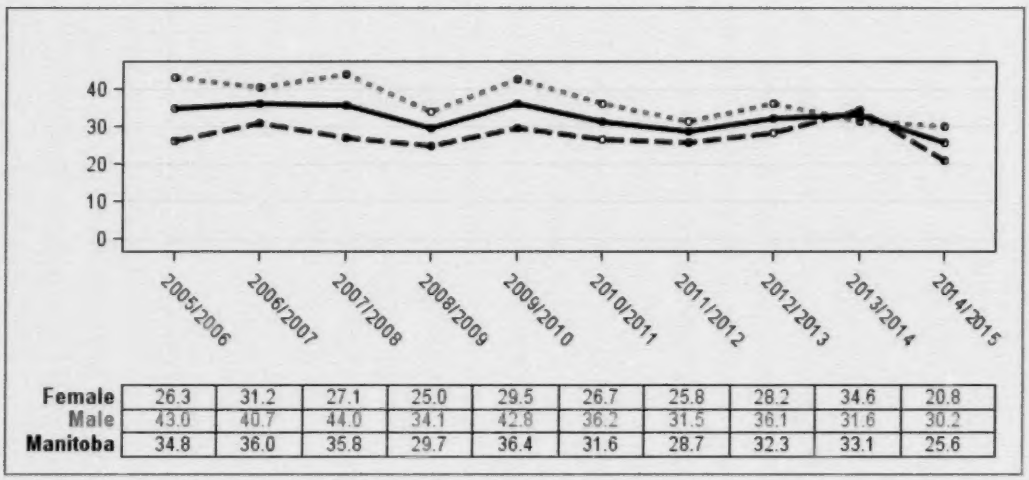


Figure 12: Age- and sex-adjusted rate of death per 100,000 children age 1 to19 by RHA, 2010/2011 to 2014/2015

Figure 12 shows the age- and sex-adjusted rate of child death by RHA of residence. Children are defined as individuals between ages 1 and 19.

From 2010/2011 to 2014/2015, there were 472 deaths among Manitoba children. This represented a rate of 30.2 deaths per 100,000 children. The child mortality rate in Northern Health Region was significantly higher than Manitoba overall, while the rate in Winnipeg Health Region was significantly lower.

Figure 13 shows the child mortality rate in Manitoba over time. The child mortality rate in Manitoba appeared to be stable over time, with the mortality rate in males remaining consistently higher than that of females.



	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015
Female	26.3	31.2	27.1	25.0	29.5	26.7	25.8	28.2	34.6	20.8
Male	43.0	40.7	44.0	34.1	42.8	36.2	31.5	36.1	31.6	30.2
Manitoba	34.8	36.0	35.8	29.7	36.4	31.6	28.7	32.3	33.1	25.6

Figure 13: Rate of death per 100,000 children age 1 to 19 by fiscal year

Disease and Injury

The following section provides an overview of the burden of illness for selected diseases and chronic conditions, along with injury hospitalizations and deaths due to injury.

In 2014/2015, 28.9% of Manitobans age 20 and older had hypertension, and 8.8% of Manitobans age one and older had diabetes.

From 2011/2012 to 2015/2016, 1,009 Manitobans age 19 and older with diabetes had a lower limb amputation.

The rate of chronic obstructive pulmonary disease (COPD) among Manitoba residents age 35 and older was 12.5% in 2014/2015.

In the same time period, there were approximately 3 heart attacks and 3 strokes for every 1,000 Manitoba residents age 40 and older.

In 2014/2015, 54.0% of Manitobans age 40 and older had one or more of the following chronic conditions: diabetes, hypertension, ischemic heart disease, heart failure, stroke or chronic obstructive pulmonary disease (COPD).

For the same time period, there were 9,080 injury-related hospitalizations. In 2014/2015 there were 678 deaths where injury was the cause of death.

Hypertension (High Blood Pressure)

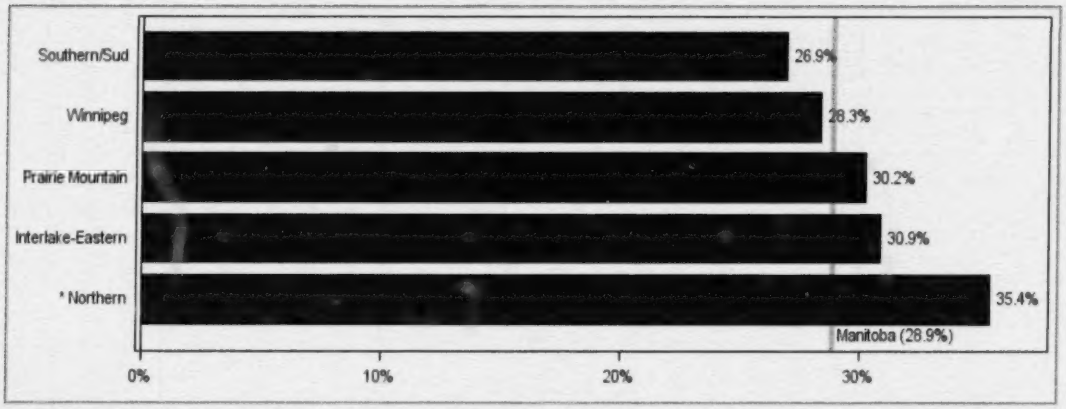


Figure 14: Age- and sex-adjusted percent of residents with hypertension age 20 and older by RHA, 2014/2015

Figure 14 shows the age- and sex-adjusted prevalence of hypertension among Manitoba residents age 20 and older by RHA of residence.

In 2014/2015, there were 281,160 Manitobans with hypertension (high blood pressure). This represented 28.9% of the total population age 20 and older. Hypertension prevalence varied across the province, and the percentage of people living with hypertension was significantly higher in Northern Health Region when compared to Manitoba overall.

Figure 15 shows hypertension prevalence in Manitoba over time. The proportion of people living with hypertension appeared to have increased steadily from 25.3% in 2005/2006 to 28.9% in 2014/2015.

♦ Due to a refinement in the definition for this indicator, rates presented below may not match those from previous reports.

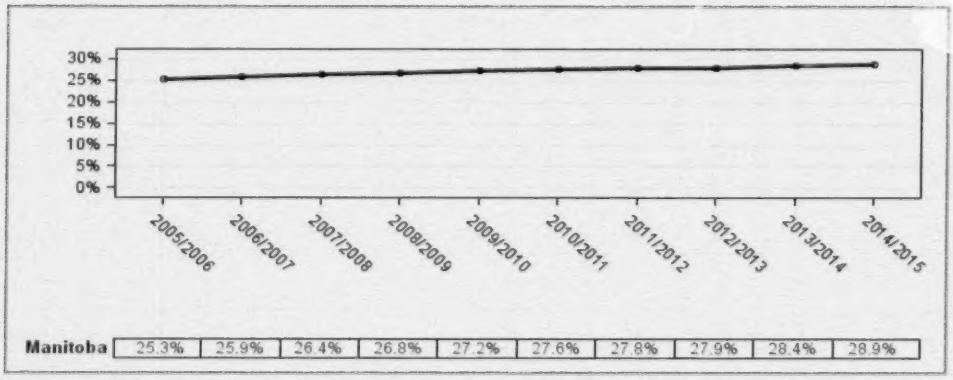


Figure 15: Percent of residents with hypertension age 20 and older by fiscal year

Diabetes

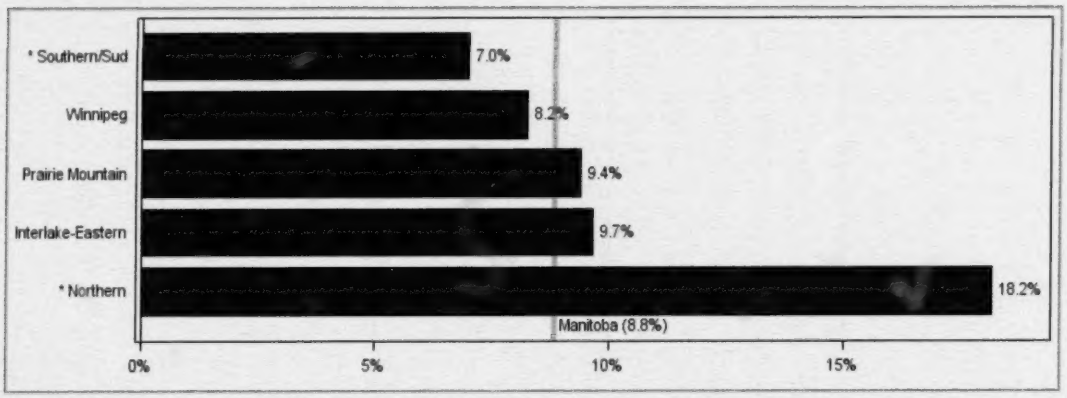


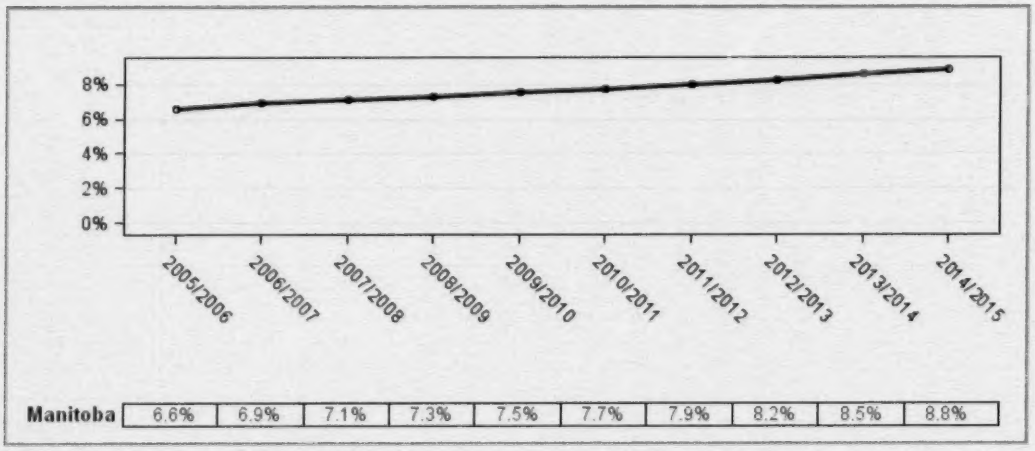
Figure 16: Age- and sex-adjusted percent of residents with diabetes age one and older by RHA, 2014/2015

Figure 16 shows the age- and sex-adjusted prevalence of diabetes among Manitoba residents age one and older by RHA of residence.

In 2014/2015, there were 114,015 Manitobans with diabetes, representing 8.8% of the total population age one and older. Diabetes prevalence varied across the province ranging from a high of 18.2% in Northern Health Region to a low of 7.0% in Southern Health-Santé Sud.

Figure 17 shows diabetes prevalence in Manitoba over time. The proportion of people living with diabetes increased steadily from 6.6% in 2005/2006 to 8.8% in 2014/2015.

♦ Due to a refinement in the definition for this indicator, rates presented below may not match those from previous reports.



	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015
Manitoba	6.6%	6.9%	7.1%	7.3%	7.5%	7.7%	7.9%	8.2%	8.5%	8.8%

Figure 17: Percent of residents with diabetes age one and older by fiscal year

Lower Limb Amputations among Residents with Diabetes

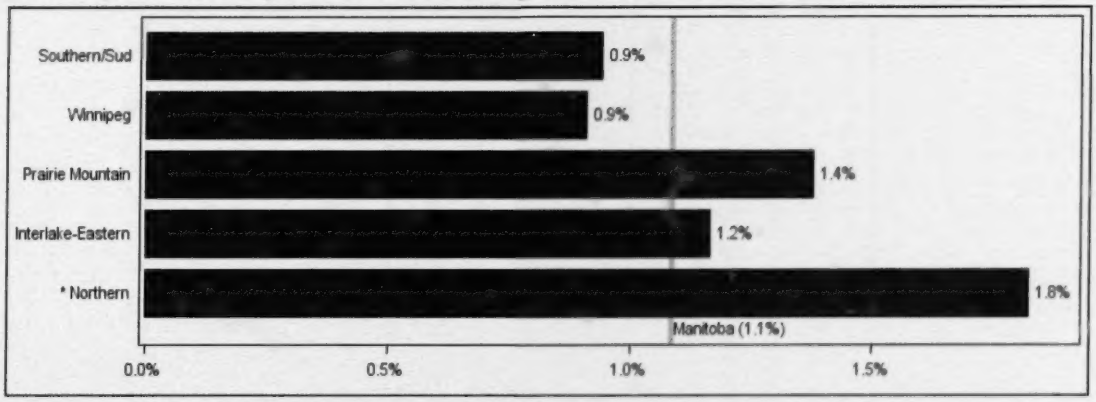


Figure 18: Age- and sex-adjusted percent of lower limb amputations among residents with diabetes age 19 and older by RHA, 2011/2012 to 2015/2016

Figure 18 shows the age- and sex-adjusted prevalence of lower limb amputations among residents with diabetes age 19 and older by RHA of residence.

From 2011/2012 to 2015/2016, there were 1,009 Manitobans with diabetes who had a lower limb amputation, representing 1.1% of the total population age 19 and older with diabetes. Lower limb amputation incidence across the province ranges from a high of 1.8% in Northern Health Region to a low of 0.9% in Southern Health-Santé Sud and Winnipeg RHA.

Figure 19 shows the percentage of lower limb amputations among Manitobans with diabetes by age group. The largest percentage of amputations is in the 50 to 69 age groups, representing 56.1% of total cases.

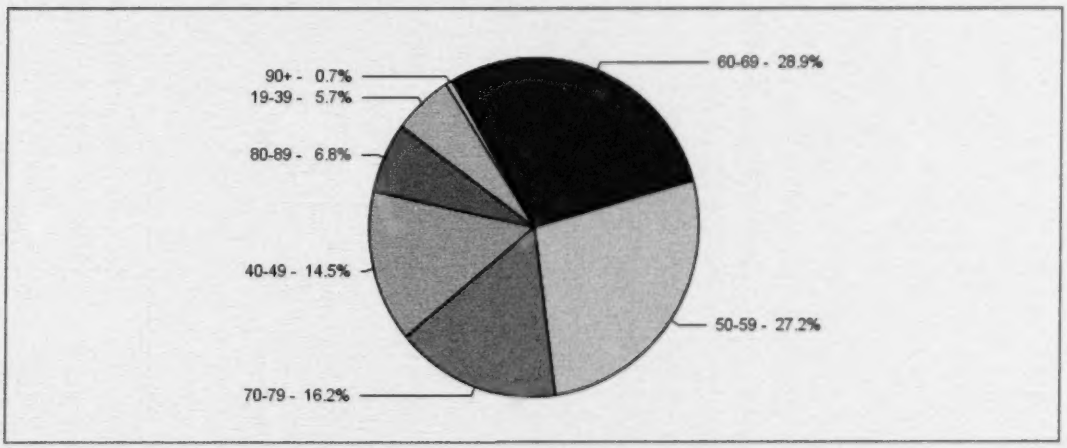


Figure 19: Percentage of lower limb amputations among residents with diabetes by age group, 2011/2012 to 2015/2016

Chronic Obstructive Pulmonary Disease (COPD)

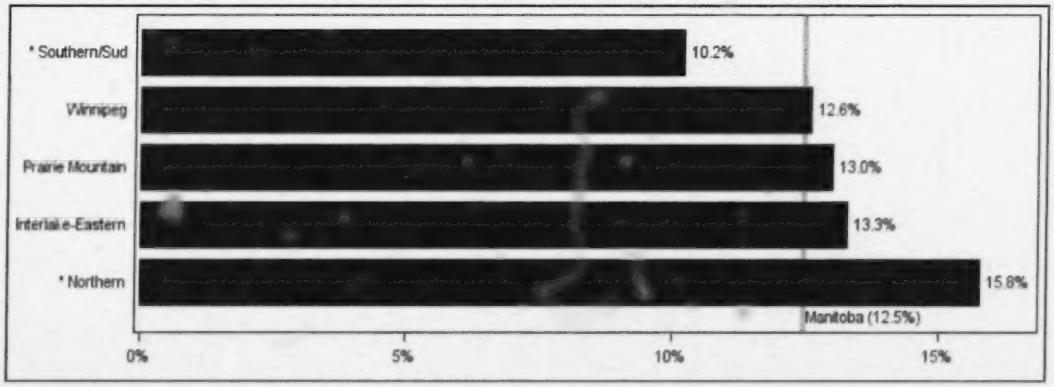


Figure 20: Age- and sex-adjusted percent of residents with chronic obstructive pulmonary disease age 35 and older by RHA, 2014/2015

Figure 20 shows the age- and sex-adjusted rate of chronic obstructive pulmonary disease (COPD) in Manitoba residents age 35 and older by RHA of residence.

In 2014/2015, there were 87,025 Manitoba residents with chronic obstructive pulmonary disease representing a rate of 12.5% of the population age 35 and older. When compared to Manitoba overall, a higher rate of chronic obstructive pulmonary disease is recorded among residents of Northern Health Region.

Figure 21 shows the rate of chronic obstructive pulmonary disease in Manitoba over time. The rate of chronic obstructive pulmonary disease has remained stable since 2005/2006.

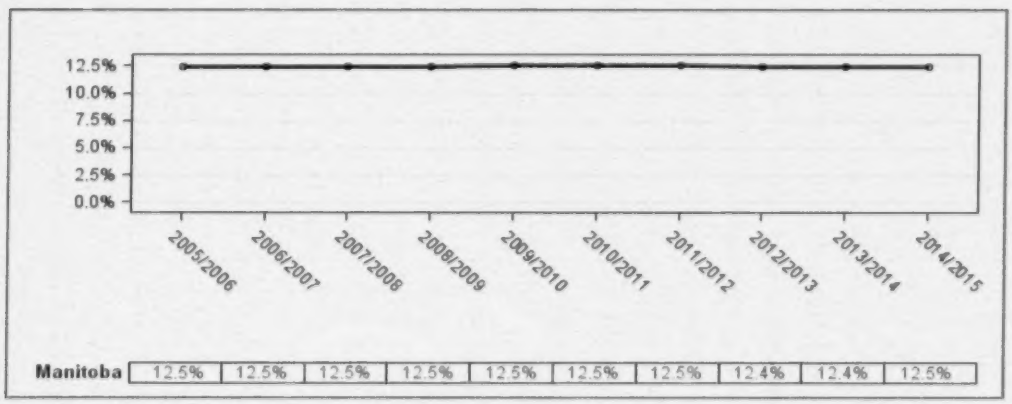


Figure 21: Percent of residents with chronic obstructive pulmonary disease age 35 and older by fiscal year

Acute Myocardial Infarction (Heart Attack)

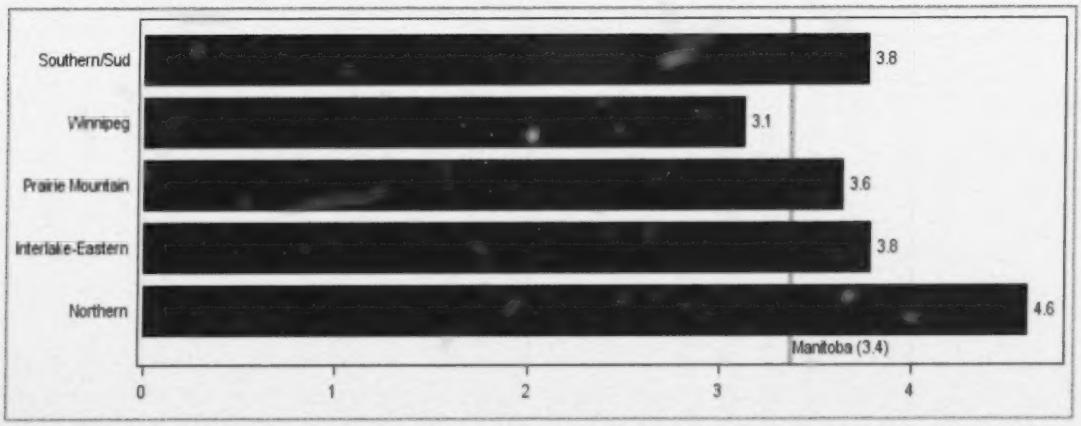


Figure 22: Age- and sex-adjusted rate of heart attack per 1,000 residents age 40 and older by RHA, 2014/2015

Figure 22 shows the age- and sex-adjusted rate of heart attack (AMI) in Manitoba residents age 40 and older by RHA of residence.

In 2014/2015, there were 2,071 heart attacks among Manitoba residents, representing a rate of 3.4 heart attacks per 1,000 population age 40 and older.

Figure 23 shows the rate of heart attacks in Manitoba over time. The rate of heart attacks decreased from 2008/2009 to 2013/2014, but the rate has remained stable for the past two fiscal years.

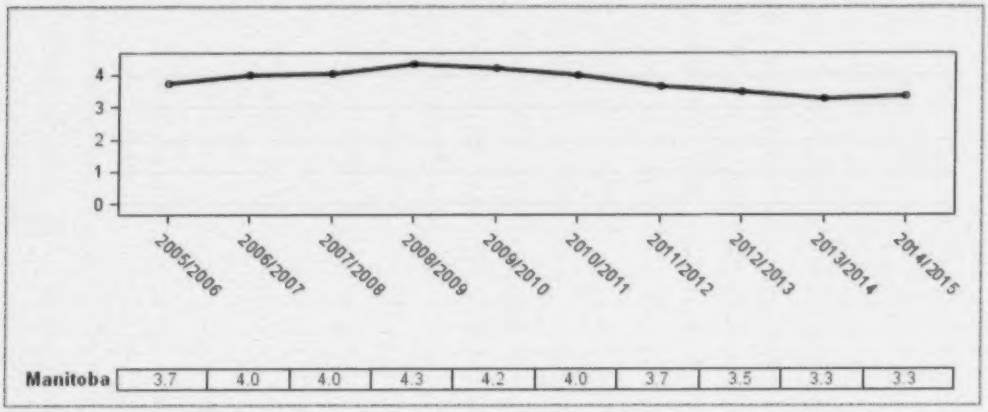


Figure 23: Rate of heart attack per 1,000 residents age 40 and older by fiscal year

Stroke

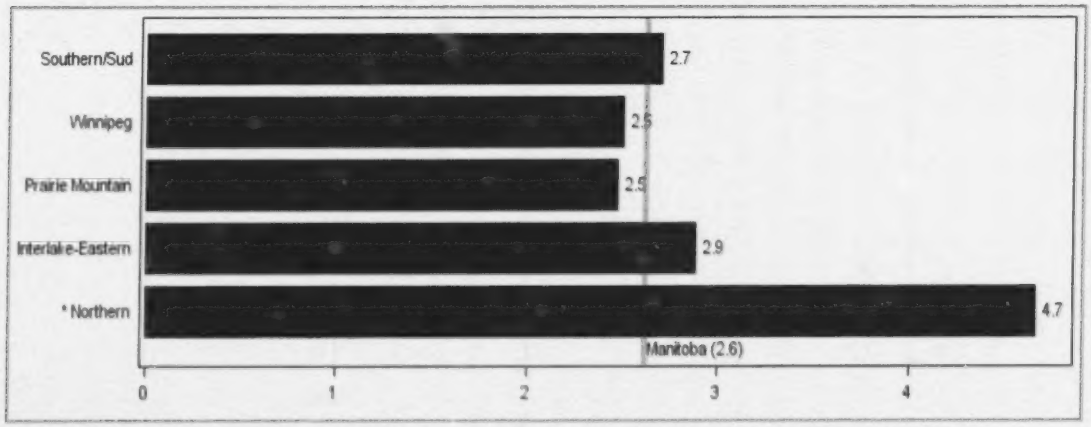


Figure 24: Age- and sex-adjusted rate of stroke per 1,000 residents age 40 and older by RHA, 2014/2015

Figure 24 shows the age- and sex-adjusted stroke rate in Manitoba residents age 40 and older by RHA of residence.

In 2014/2015, there were 1,607 strokes among Manitoba residents, representing a rate of 2.6 strokes per 1,000 population age 40 and older. Rates varied across the province. When compared to Manitoba overall, a significantly higher rate of strokes occurred among Northern Health Region residents.

Figure 25 shows the stroke rate in Manitoba residents over time. The rate of strokes is relatively stable with the lowest rate (2.5 per 1,000 population) in 2011/2012 and the highest rate (2.8 per 1,000 population) in 2007/2008 and 2012/2013.

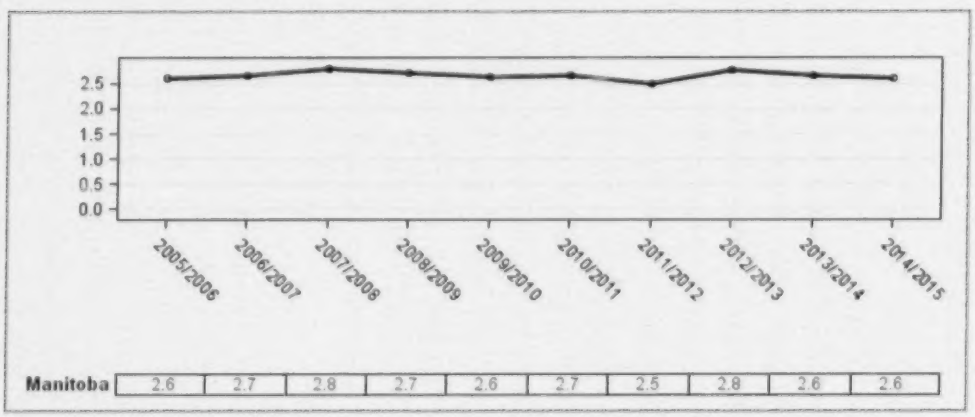


Figure 25: Rate of stroke per 1,000 residents age 40 and older by fiscal year

Chronic Conditions

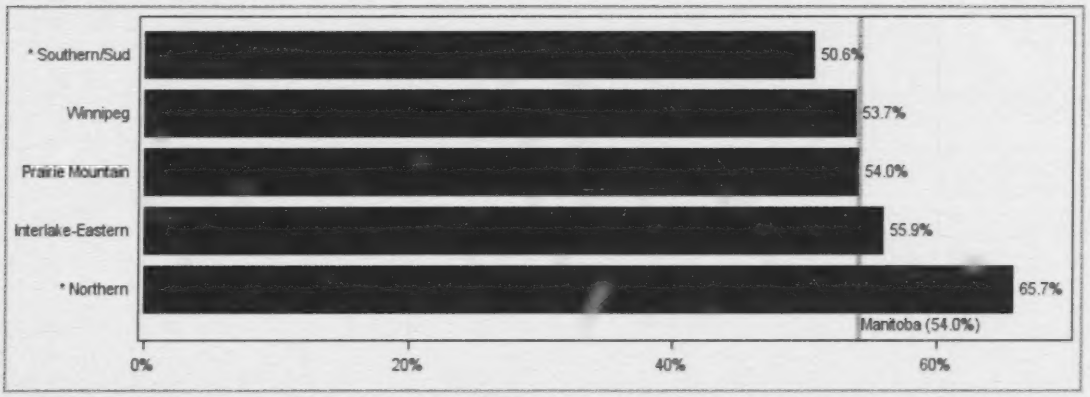


Figure 26: Age- and sex-adjusted percent of residents with chronic conditions age 40 and older by RHA, 2014/2015

Figure 26 shows the age- and sex-adjusted percent of people living with chronic conditions. The chronic condition rate is defined as the percent of the population age 40 and older having one or more of the following conditions: diabetes, hypertension, ischemic heart disease, heart failure, stroke or chronic obstructive pulmonary disease (COPD).

In 2014/2015, 331,828 Manitobans age 40 and older received medical care for one or more chronic conditions, representing 54.0% of the Manitoba population of the same age group. The percent of the population with at least one chronic condition ranged from 50.6% in Southern Health-Santé Sud to 65.7% in Northern Health Region.

Of those residents living with a chronic condition, Figure 27 shows the proportion with one or multiple chronic conditions. Over one-half (51.9%) of those with a chronic condition had just one condition, 27.9% had two conditions and the remaining 20.2% had three or more chronic conditions.

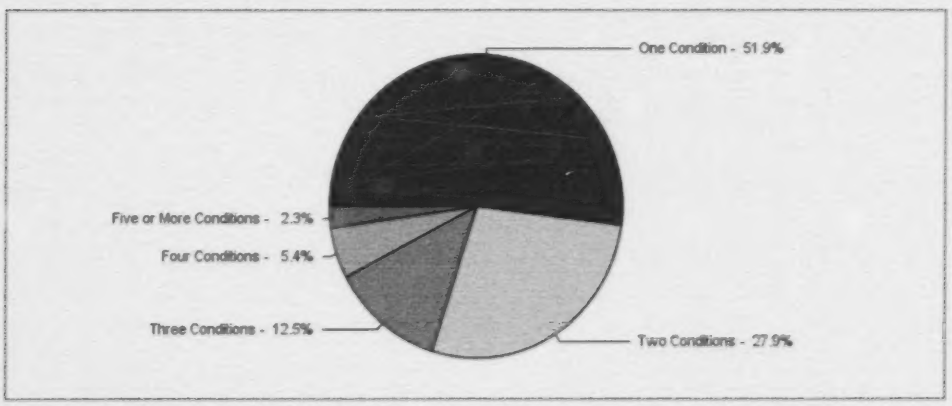


Figure 27: Percentage of residents with chronic conditions age 40 and older by the number of chronic conditions, 2014/2015

♦ Due to a refinement in the definition for this indicator, rates presented below may not match those from previous reports.

Injury Hospitalization

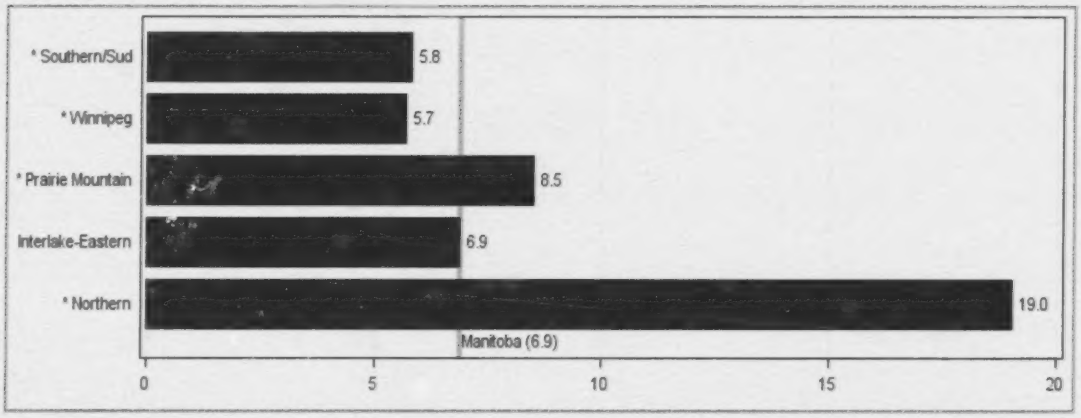
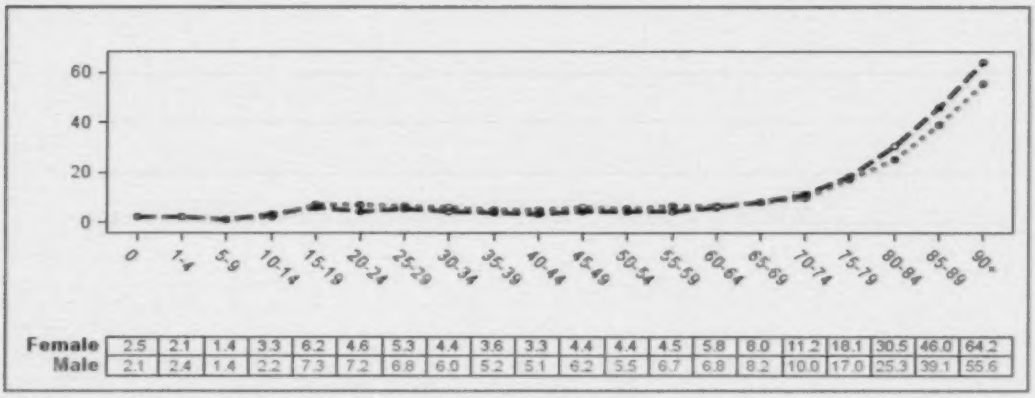


Figure 28: Age- and sex-adjusted rate of hospitalization for injury per 1,000 residents by RHA, 2015/2016

Figure 28 shows the age- and sex-adjusted rate of injury hospitalizations per 1,000 residents.

In 2015/2016, there were 9,080 hospitalizations related to injury among Manitoba residents, representing a rate of 6.9 injury hospitalizations per 1,000 population. Rates varied significantly across the province. Residents of Northern Health Region had nearly three times the rate of injury hospitalizations compared to Manitoba overall, and the rate for Prairie Mountain Health was also significantly higher than the provincial average. Residents of Winnipeg RHA and Southern Health-Santé Sud had significantly lower injury hospitalization rates.

Figure 29 shows the rate of injury hospitalization in 2015/2016 among Manitobans by age and sex. An elevated rate of injury hospitalization rates was evident for those aged 15 to 24, particularly for males. The rate remained higher than females until the age of 69. At the age of 70 the female rate exceeded that of males. Injury hospitalization rates for both sexes began to increase at the age of 65 and continued to increase exponentially up to age 90+.



	0	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+
Female	2.5	2.1	1.4	3.3	6.2	4.6	5.3	4.4	3.6	3.3	4.4	4.4	4.5	5.8	8.0	11.2	18.1	30.5	46.0	64.2
Male	2.1	2.4	1.4	2.2	7.3	7.2	6.8	6.0	5.2	5.1	6.2	5.5	6.7	6.8	8.2	10.0	17.0	25.3	39.1	55.6

Figure 29: Age- and sex-specific rate of hospitalization for injury per 1,000 residents, 2015/2016

Injury Mortality

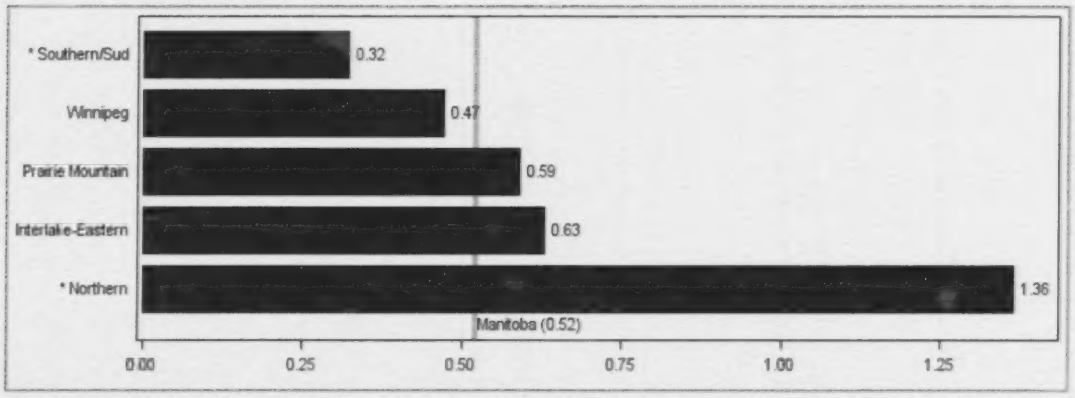


Figure 30: Age- and sex-adjusted rate of death due to injury per 1,000 residents by RHA, 2014/2015

Figure 30 shows the age- and sex-adjusted rate of death for which an injury was the cause, per 1,000 residents.

In 2014/2015, there were 678 deaths due to injury for Manitoba residents, representing a rate of 0.52 deaths per 1,000 population. The age-and sex-adjusted death rate in Northern Health Region was significantly higher than Manitoba overall, and the rate in Southern Health-Santé Sud was significantly lower.

In Manitoba overall the five most common cause of injury-related deaths were:

1) falls (28.3%)
2) violence to self (21.5%)
3) poisoning (18.1%)
4) motor vehicle (10.2%)
5) other (7.2%)

These causes combined represented 85.3% of all injury-related deaths (Figure 31).

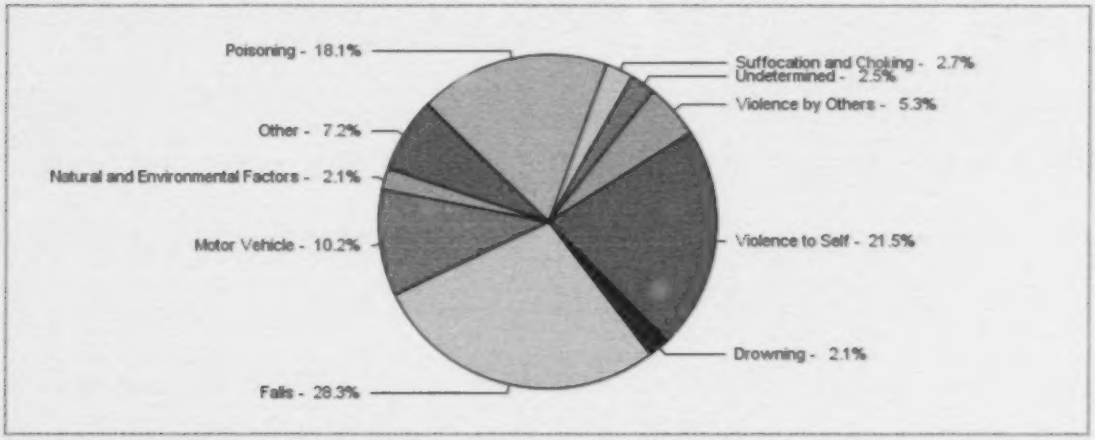

Poisoning - 18.1%
Other - 7.2%
Natural and Environmental Factors - 2.1%
Motor Vehicle - 10.2%
Falls - 28.3%
Suffocation and Choking - 2.7%
Undetermined - 2.5%
Violence by Others - 5.3%
Violence to Self - 21.5%
Drowning - 2.1%

Figure 31: Percentage of injury deaths by cause, 2014/2015

Prevalence of Mental Illness and Use of Services

The following section provides an overview of the prevalence of mental illness. Between 2011/2012 and 2015/2016, 25.6% of Manitobans age 10 and older received medical care for at least one of the following mental illnesses: depression, anxiety, substance abuse, personality disorder, or schizophrenia.

In 2015/2016 there were 579 hospitalizations related to self-inflicted injury for Manitoba residents. This represented a rate of 50.2 self-inflicted injury hospitalizations per 100,000 residents age 10 and older.

On average, there were about 198 suicides per year for the period of 2010/2011 to 2014/2015. This represented approximately 2 suicide deaths for every 10,000 Manitoba residents.

Cumulative Mental Illness

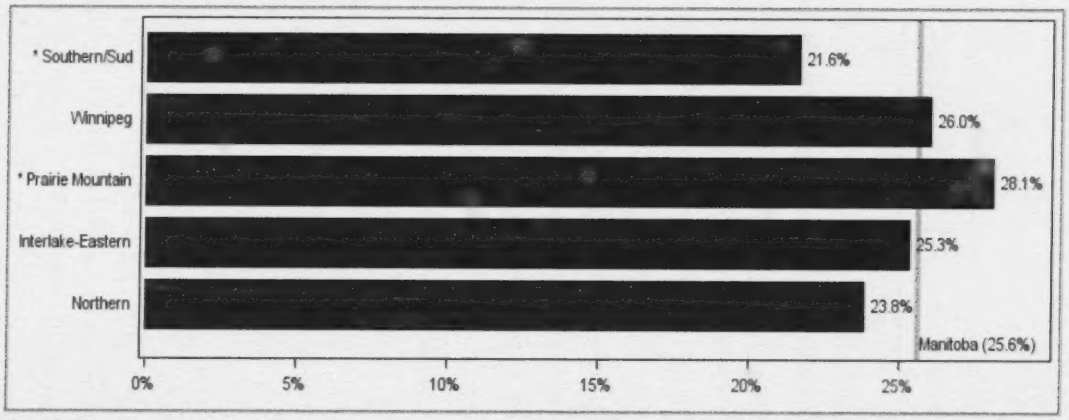
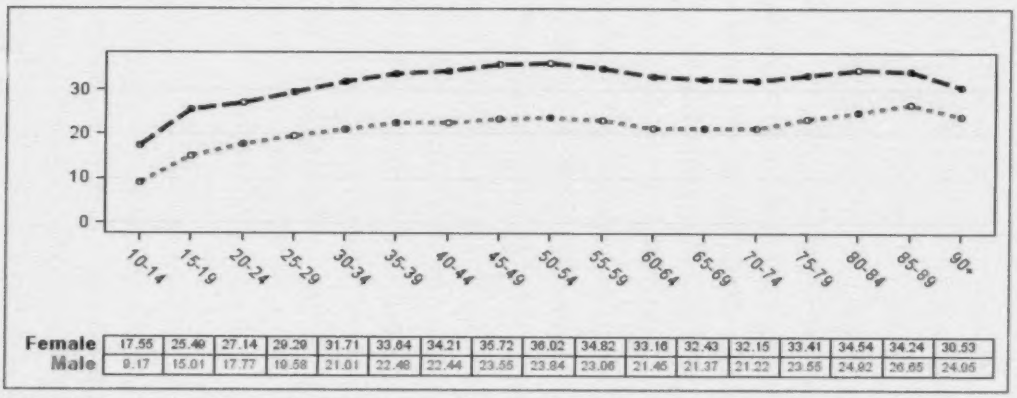


Figure 32: Age- and sex-adjusted prevalence of cumulative mental illness among residents age 10 and older by RHA, 2011/2012 to 2015/2016

Figure 32 shows the age- and sex-adjusted prevalence of cumulative mental illness among Manitoba residents age 10 and older by RHA of residence. Cumulative mental illness is defined as receiving medical care for at least one of: depression, anxiety disorders, substance abuse, schizophrenia or a personality disorder.

From 2011/2012 to 2015/2016, there were 283,552 Manitoba residents treated for at least one of these mental illnesses, representing 25.6% of Manitoba residents age 10 and older. The age- and sex-adjusted rate in Southern Health-Santé Sud was significantly lower than the Manitoba rate, while the rate in Prairie Mountain Health was significantly higher.

Figure 33 shows the prevalence of cumulative mental illness by age and sex. From 2011/2012 to 2015/2016 the rate for females was higher than males for all age groups.



	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+
Female	17.55	25.49	27.14	29.29	31.71	33.64	34.21	35.72	36.02	34.82	33.16	32.43	32.15	33.41	34.54	34.24	30.53
Male	9.17	15.01	17.77	19.58	21.01	22.48	22.44	23.55	23.84	23.06	21.46	21.37	21.22	23.55	24.92	26.65	24.05

Figure 33: Crude percent of residents age 10 and older with cumulative mental illness by age and sex, 2011/2012 to 2015/2016

Mood and Anxiety Disorders

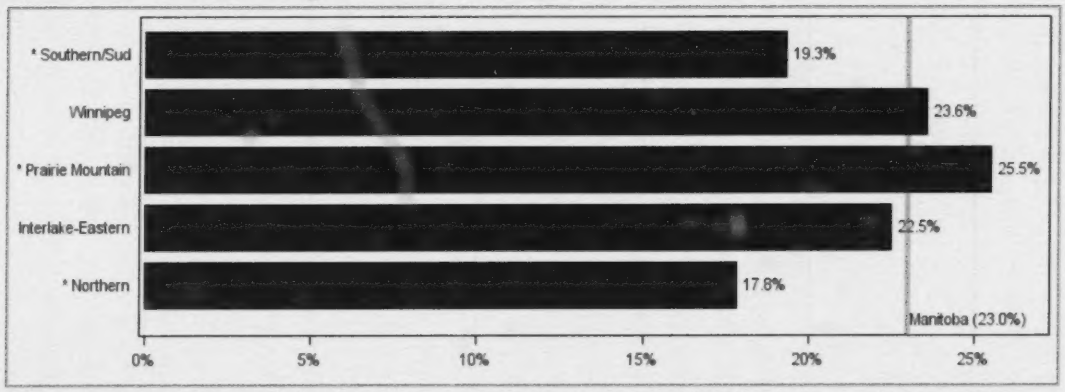
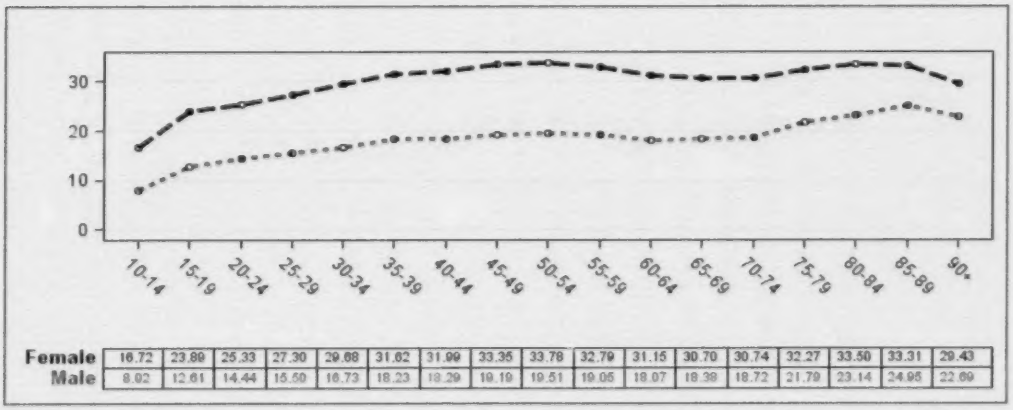


Figure 34: Age- and sex-adjusted prevalence of mood and anxiety disorders among residents age 10 and older by RHA, 2011/2012 to 2015/2016

Figure 34 shows the age- and sex-adjusted prevalence of mood and anxiety disorders among Manitoba residents age 10 and older by RHA of residence.

From 2011/2012 to 2015/2016, there were 254,289 Manitoba residents treated for mood and anxiety disorders, representing 23.0% of Manitoba residents age 10 and older. The age- and sex-adjusted rates in Northern Health Region and Southern Health-Santé Sud were significantly lower than the Manitoba rate, while the rate for Prairie Mountain Health was significantly higher.

Figure 35 shows the prevalence of mood and anxiety disorders by age and sex. From 2011/2012 to 2015/2016 the rate for females was higher than males for all age groups.



	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+
Female	16.72	23.89	25.33	27.30	29.68	31.62	31.99	33.35	33.76	32.79	31.15	30.70	30.74	32.27	33.50	33.31	29.43
Male	8.02	12.61	14.44	15.50	16.73	18.23	19.29	19.19	19.51	19.05	18.07	18.39	18.72	21.79	23.14	24.95	22.89

Figure 35: Crude percent of residents age 10 and older with mood and anxiety disorders by age and sex, 2011/2012 to 2015/2016

Personality Disorders

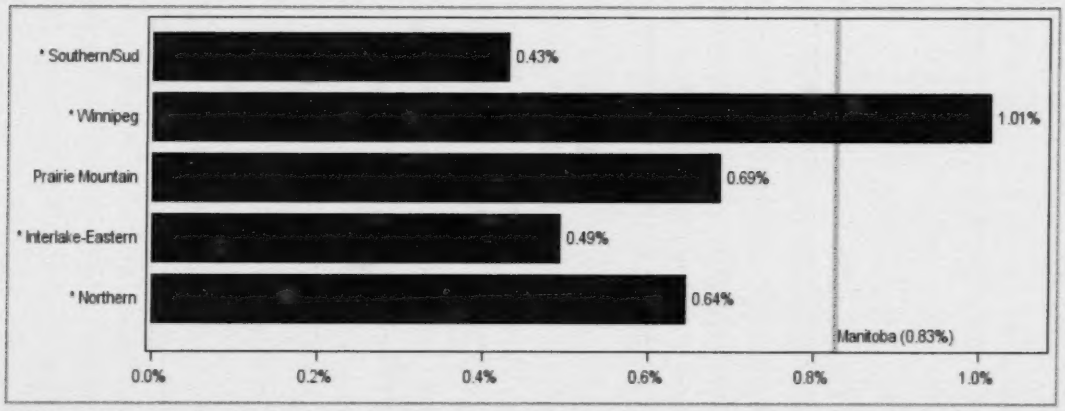
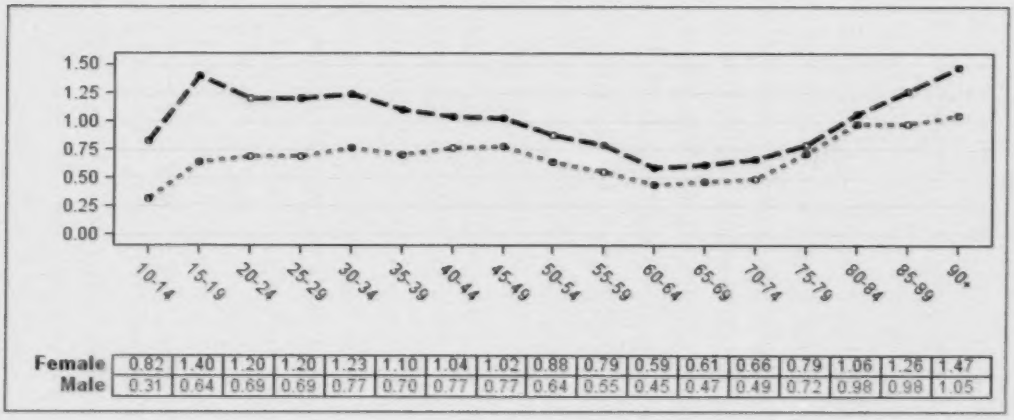


Figure 36: Age- and sex-adjusted prevalence of personality disorders among residents age 10 and older by RHA, 2011/2012 to 2015/2016

Figure 36 shows the age- and sex-adjusted prevalence of personality disorders among Manitoba residents age 10 and older by RHA of residence.

From 2011/2012 to 2015/2016, there were 9,154 Manitoba residents treated for a personality disorder, representing 0.83% of Manitoba residents age 10 and older. The age- and sex-adjusted rates were significantly lower in Southern Health-Santé Sud, Interlake-Eastern RHA and Northern Health Region, when compared to the Manitoba rate, while the rate for Winnipeg RHA was significantly higher.

Figure 37 shows the prevalence of personality disorders by age and sex. From 2011/2012 to 2015/2016 the rate for females was higher than males for all age groups. The rate for both sexes began to increase at the age of 70 and continued to increase up to the age of 90+.



	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+
Female	0.82	1.40	1.20	1.20	1.23	1.10	1.04	1.02	0.88	0.79	0.59	0.61	0.66	0.79	1.06	1.26	1.47
Male	0.31	0.64	0.69	0.69	0.77	0.70	0.77	0.77	0.64	0.55	0.45	0.47	0.49	0.72	0.98	0.98	1.05

Figure 37: Crude percent of residents age 10 and older with personality disorder by age and sex, 2011/2012 to 2015/2016

Schizophrenia

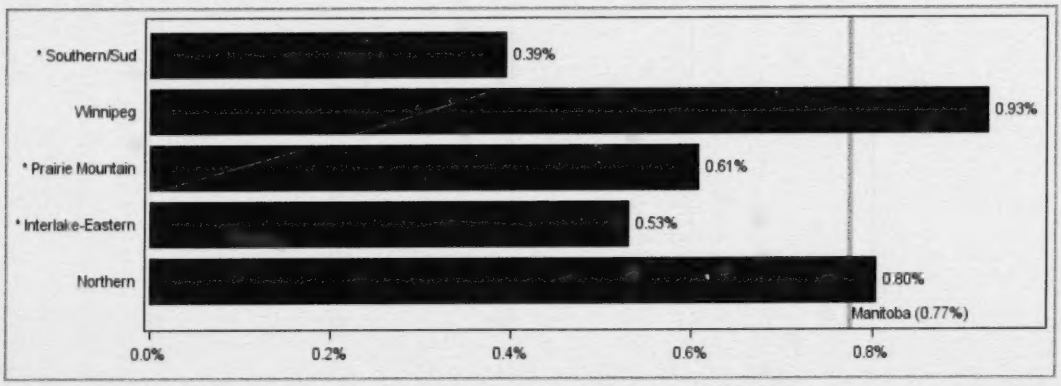
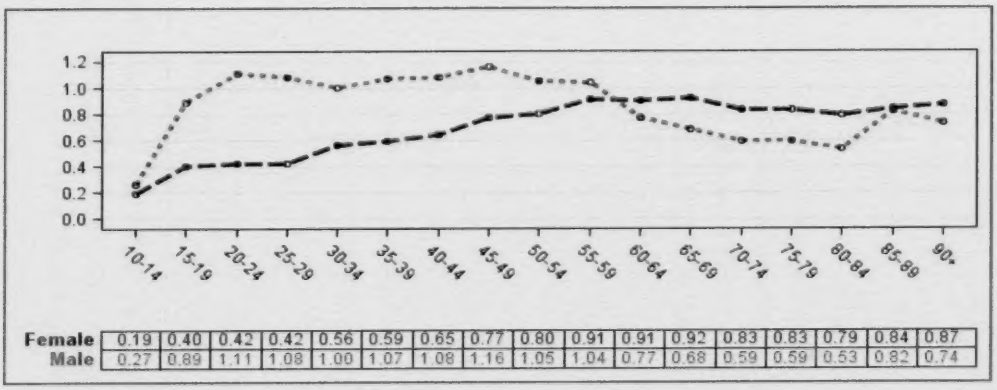


Figure 38: Age- and sex-adjusted prevalence of schizophrenia among residents age 10 and older by RHA, 2011/2012 to 2015/2016

Figure 38 shows the age- and sex-adjusted prevalence of schizophrenia among Manitoba residents age 10 and older by RHA of residence.

From 2011/2012 to 2015/2016, there were 8,577 Manitoba residents treated for schizophrenia, representing 0.77% of Manitoba residents age 10 and older. The age- and sex-adjusted rates in Southern Health-Santé Sud, Interlake-Eastern RHA and Prairie Mountain Health were significantly lower than Manitoba overall.

Figure 39 shows the prevalence of schizophrenia by age and sex. From 2011/2012 to 2015/2016 the rate for males under the age of 60 was higher than females. The rate for females age 60 and older was higher than males.



	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+
Female	0.19	0.40	0.42	0.42	0.56	0.59	0.65	0.77	0.80	0.91	0.91	0.92	0.83	0.83	0.79	0.84	0.87
Male	0.27	0.89	1.11	1.08	1.00	1.07	1.08	1.16	1.05	1.04	0.77	0.68	0.59	0.59	0.53	0.82	0.74

Figure 39: Crude percent of residents age 10 and older with schizophrenia by age and sex, 2011/2012 to 2015/2016

Substance Abuse

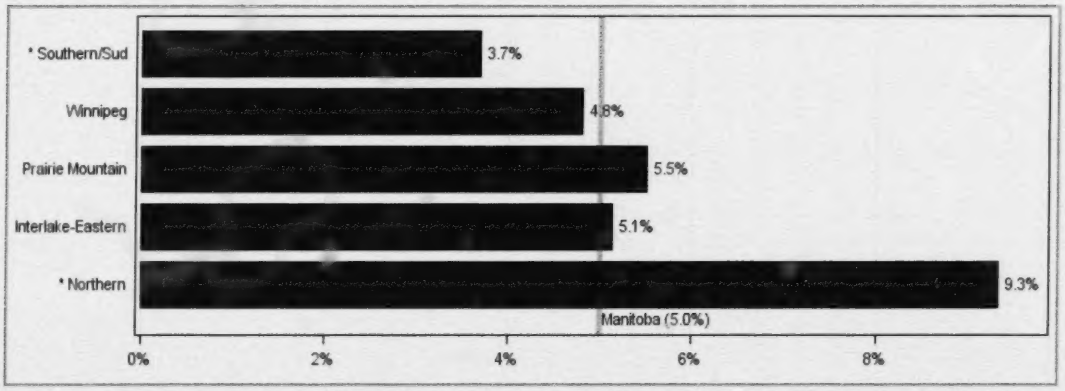
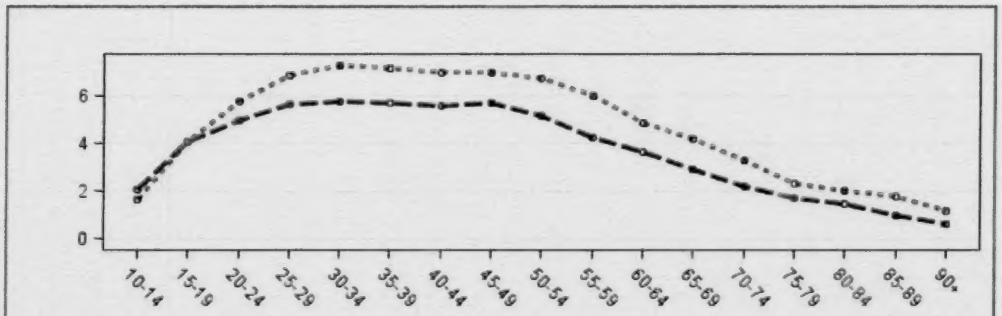


Figure 40: Age- and sex-adjusted prevalence of substance abuse among residents age 10 and older by RHA, 2011/2012 to 2015/2016

Figure 40 shows the age- and sex-adjusted prevalence of substance abuse among Manitoba residents age 10 and older by RHA of residence.

From 2011/2012 to 2015/2016, there were 55,281 Manitoba residents treated for substance abuse, representing 5.0% of Manitoba residents age 10 and older. The rate for Northern Health Region was almost 2 times higher than the Manitoba rate, while the rate for Southern Health-Santé Sud was significantly lower.

Figure 41 shows the prevalence of substance abuse by age and sex. From 2011/2012 to 2015/2016 the rate for males age 20+ was higher than females.



Female	2.05	4.11	4.97	5.67	5.77	5.69	5.58	5.72	5.15	4.25	3.63	2.94	2.23	1.73	1.49	0.97	0.60
Male	1.65	4.06	5.78	6.87	7.29	7.14	7.01	7.00	6.76	6.00	4.86	4.18	3.29	2.33	2.02	1.76	1.16

Figure 41: Crude percent of residents age 10 and older with substance abuse by age and sex, 2010/2011 to 2014/2015

Hospitalization for Self-Inflicted Injury

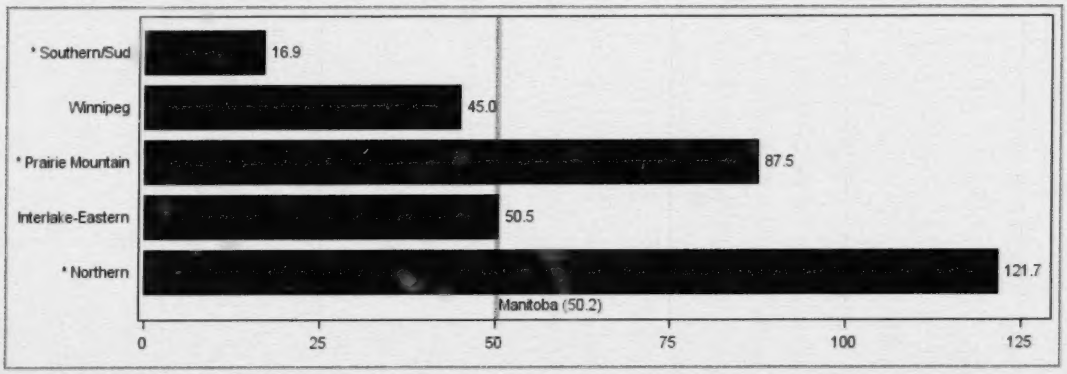
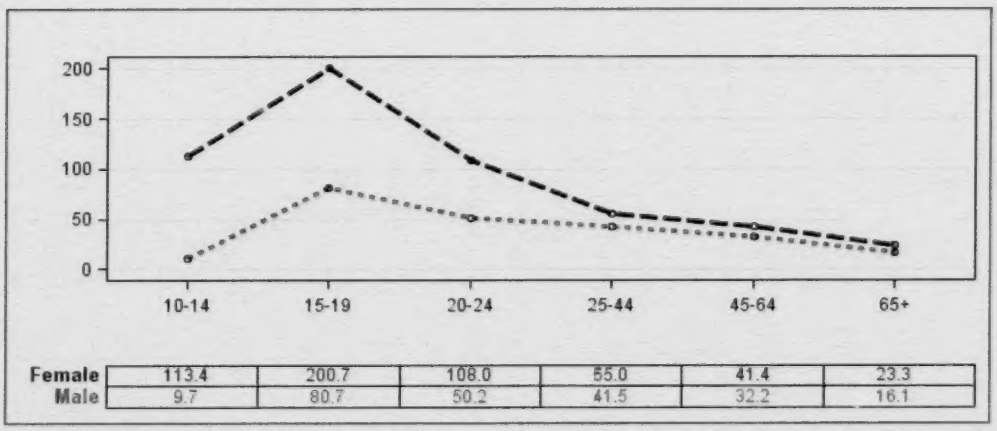


Figure 42: Age- and sex-adjusted rate of hospitalization due to self-inflicted injury per 100,000 residents age 10 and older by RHA, 2015/2016

Figure 42 shows the age- and sex-adjusted rate of hospitalization for which a self-inflicted injury was the cause, per 100,000 residents age 10 and older.

In 2015/2016, there were 579 hospitalizations due to self-inflicted injury among Manitoba residents, representing a rate of 50.2 hospitalizations per 100,000 population. The rates for Southern Health-Santé Sud, Prairie Mountain Health and Northern Health Region were significantly different than the provincial average, with Northern Health Region's rate more than 7 times higher than the rate for Southern Health-Santé Sud.

Figure 43 shows the age- and sex-specific rate of hospitalization due to self-inflicted injury per 100,000 residents. Manitoba females between the ages of 15 and 19 had a rate 2.5 times that of males within the same age grouping.



	10-14	15-19	20-24	25-44	45-64	65+
Female	113.4	200.7	108.0	55.0	41.4	23.3
Male	9.7	80.7	50.2	41.5	32.2	16.1

Figure 43: Crude rate per 100,000 residents age 10 and older hospitalized for self-inflicted injury by age and sex, 2015/2016

Suicide

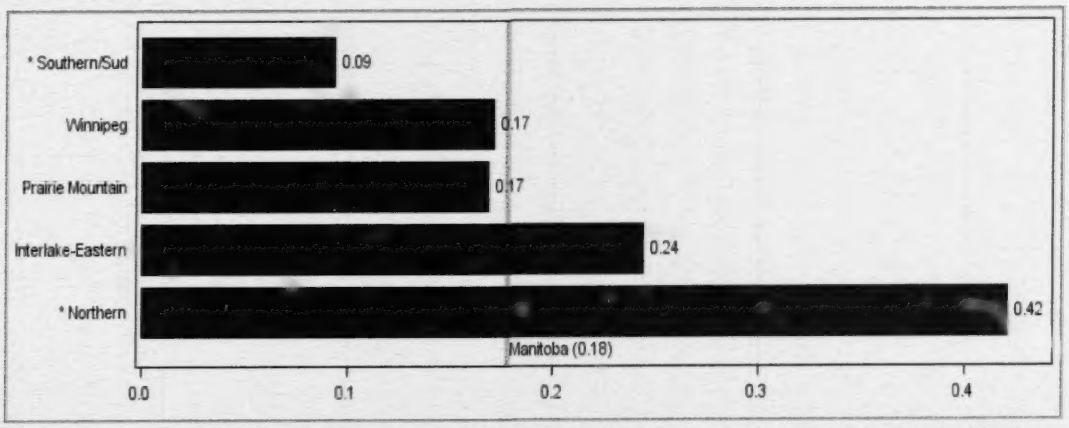
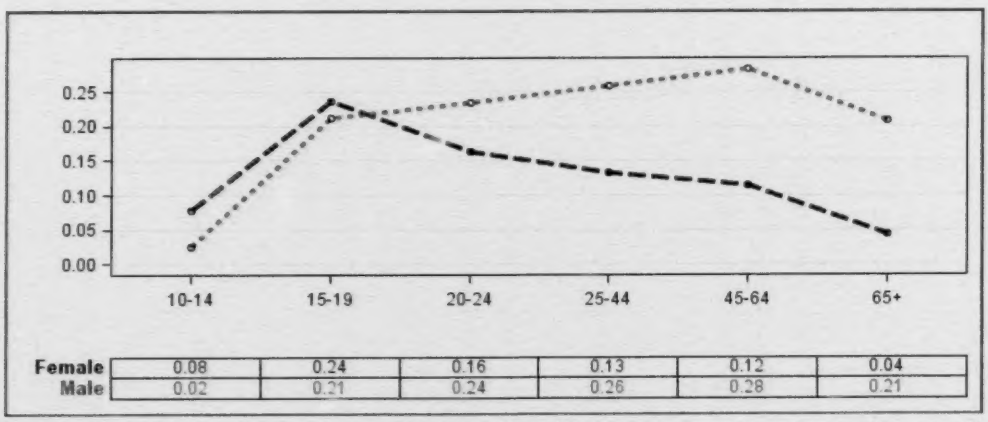


Figure 44: Age- and sex-adjusted rate of death due to suicide per 1,000 residents age 10 and older by RHA, 2010/2011 to 2014/2015

Figure 44 shows the age- and sex-adjusted rate of death for which suicide was the cause, per 1,000 Manitoba residents age 10 and older.

From 2010/2011 to 2014/2015, there were 988 deaths due to suicide among Manitoba residents, representing a rate of 0.18 deaths per 1,000 population. The rate in Northern Health Region was significantly higher than Manitoba overall, while Southern Health-Santé Sud's rate was significantly lower.

Figure 45 shows the death rate for suicide by age and sex. From 2010/2011 to 2014/2015, the rate for males was higher than females for all age groups with the exception of ages 10 to 19.



	10-14	15-19	20-24	25-44	45-64	65+
Female	0.08	0.24	0.16	0.13	0.12	0.04
Male	0.02	0.21	0.24	0.26	0.28	0.21

Figure 45: Crude rate of suicide deaths per 1,000 residents by age and sex, 2010/2011 to 2014/2015

Health Services Insurance Plan

Manitoba residents who are Canadian citizens or have immigrant status (including work/study permit holders), and who are either a permanent resident of Manitoba or reside in Manitoba for at least six months of the year, are eligible for Manitoba Health, Seniors and Active Living.

The Health Services Insurance Plan operates outside the Provincial Consolidated Fund and provides for payment of insured services for hospitals, personal care homes, and health care providers on behalf of Manitoba residents. Other plans include the prescription drugs program (Pharmacare), Ambulance, Air Ambulance, and Northern Patient Transportation programs.

Insured Services per Capita

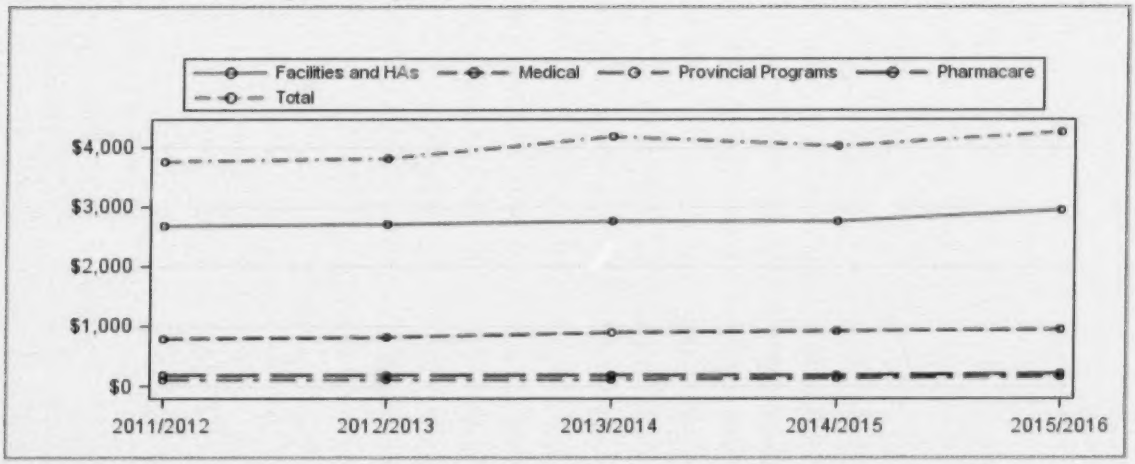


Figure 46: Crude cost of insured services per capita by fiscal year

Figure 46 represents the cost per capita of insured services in Manitoba.

In 2015/2016, approximately five billion dollars was spent on insured services in Manitoba, representing $4,254 per capita.

Figure 47 shows the distribution of total costs. In 2015/2016 68.9% of the total cost was attributed to facilities and health authorities (HAs) followed by medical services for fee for service physicians (22.5%), Pharmacare programs (4.7%) and provincial programs (3.8%).

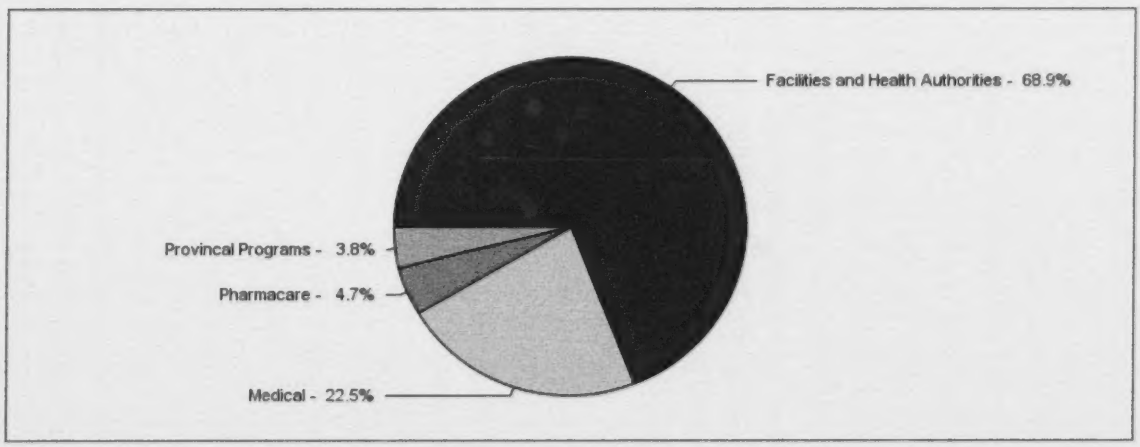


Figure 47: Percentage of total cost, 2015/2016

Use of Medical Services

The following section provides an overview of the use of medical services in Manitoba. This includes number of physicians and nurses, physician use, majority of care and ambulatory care visit rates.

In 2015 there were 17,919 nurses and 2,748 physicians registered in Manitoba. About 77.0% of Manitoba residents saw a physician at least once in 2015/2016. On average, these Manitobans saw a physician about 5 times.

Nearly three-quarters (69.8%) of residents saw the same physician for more than 50% of their ambulatory visits.

Overall, 70.4% of Manitoba residents saw a primary care physician and 36.5% visited a specialist care physician at least once during the year 2015/2016.

Number of General Practitioners and Specialists

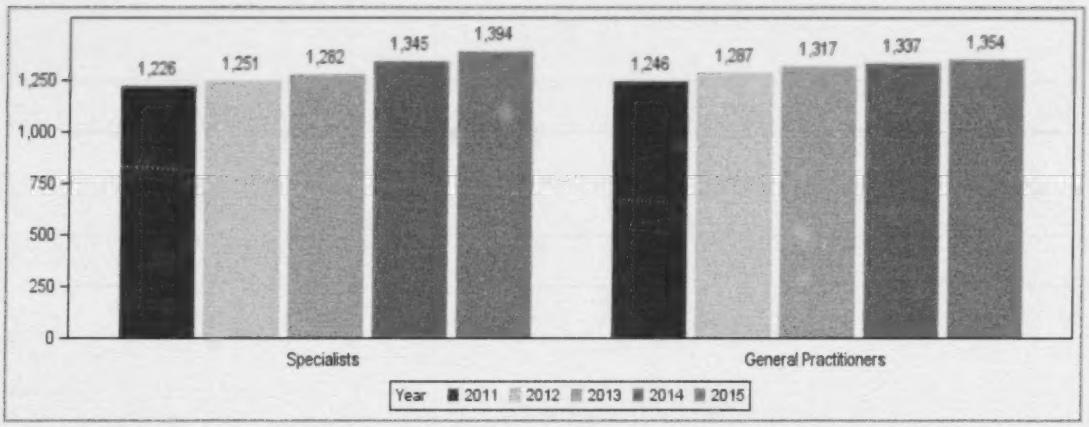


Figure 48: Number of General Practitioners and Specialists in Manitoba, 2011 - 2015

Figure 48 shows the number of general practitioners and specialists in Manitoba as reported by the College of Physicians and Surgeons of Manitoba by calendar year.

For 2015, there were a total of 2,748 physicians in Manitoba. This consisted of nearly even numbers of family physicians and specialists.

Number of Nurses and Nurse Practitioners

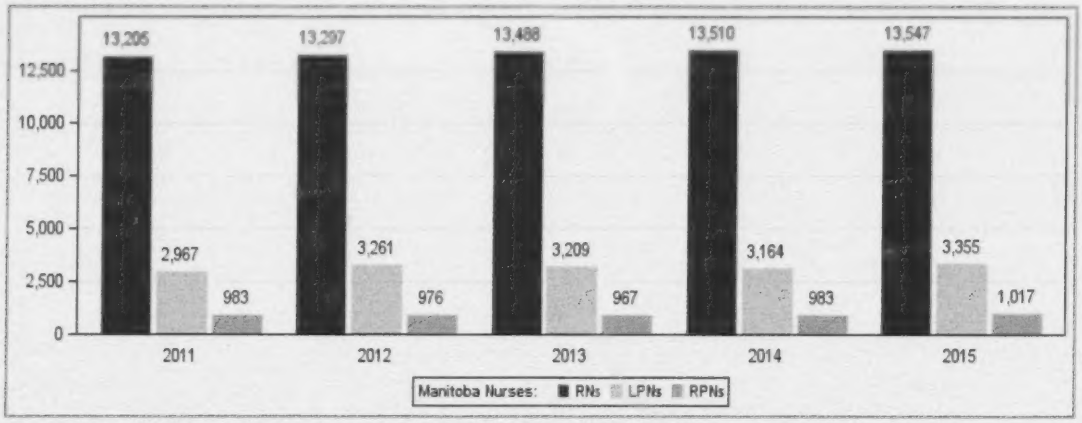


Figure 49: Number of RNs, LPNs and RPNs in Manitoba, 2011-2015

Figure 49 shows the number of registered nurses (RNs), licensed practical nurses (LPN)s and registered psychiatric nurses (RPNs) as reported by the College of Registered Nurses of Manitoba.

For 2015, there were 17,919 RNs, LPNs and RPNs registered with the College of Registered Nurses of Manitoba, of which 75.6% were registered nurses. The remaining 24.4% consisted of registered psychiatric nurses and licensed practical nurses.

Figure 50 shows the number of nurse practitioners in Manitoba. The number of registered nurse practitioners increased from 110 in 2011 to 172 in 2015.

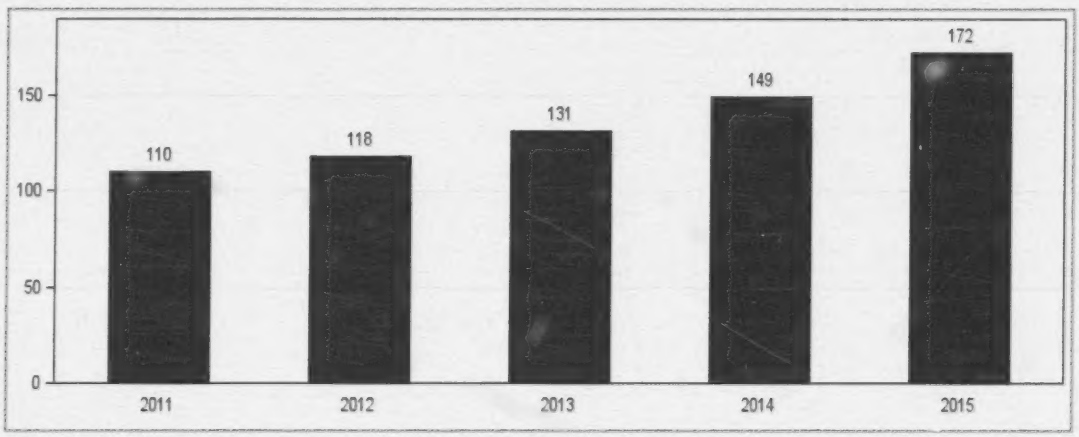


Figure 50: Number of Nurse Practitioners in Manitoba, 2011-2015

Physician Use—Overall

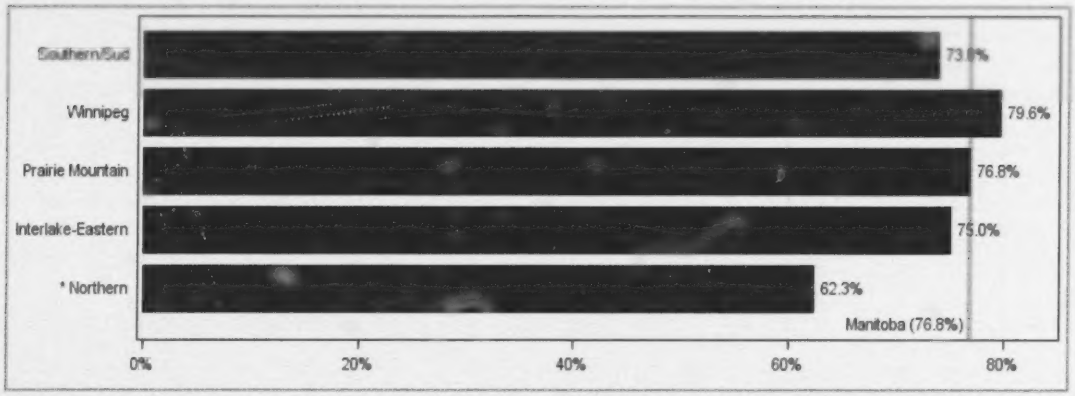


Figure 51: Age- and sex-adjusted percent of residents who used overall physician services by RHA, 2015/2016

Figure 51 shows the age- and sex-adjusted percent of Manitobans who used overall physician services by RHA of residence.

In 2015/2016, 76.8% of Manitoba residents saw a physician at least once during the year. Residents of Northern Health Region appeared to have lower physician use. However, these values are affected by missing data for services provided by salaried physicians and should be interpreted with caution.

Figure 52 shows the overall physician use rate in 2015/2016 by age and sex. Females had a higher use of physicians than males for all age groups over the age of 10 years.

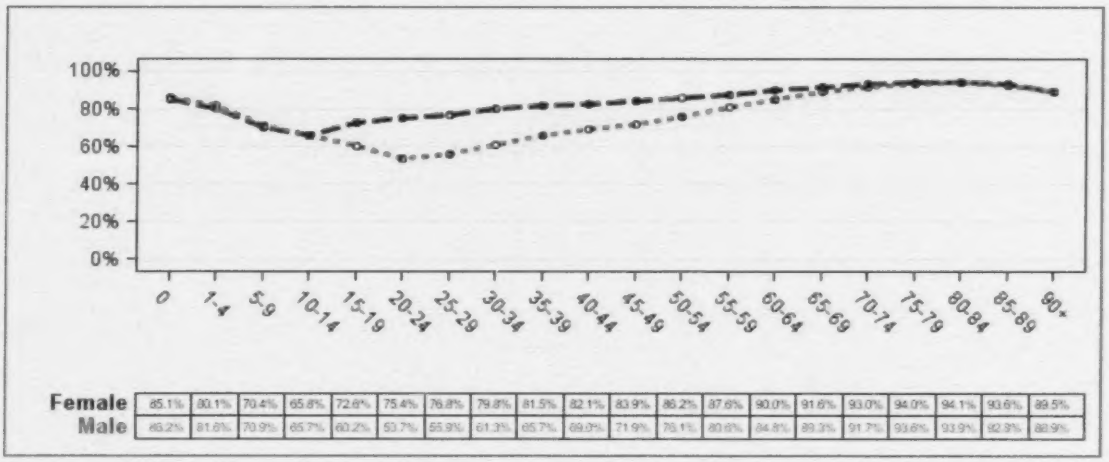


Figure 52: Crude percent of residents who used physician services by age and sex, 2014/2015

Physician Use—Primary Care

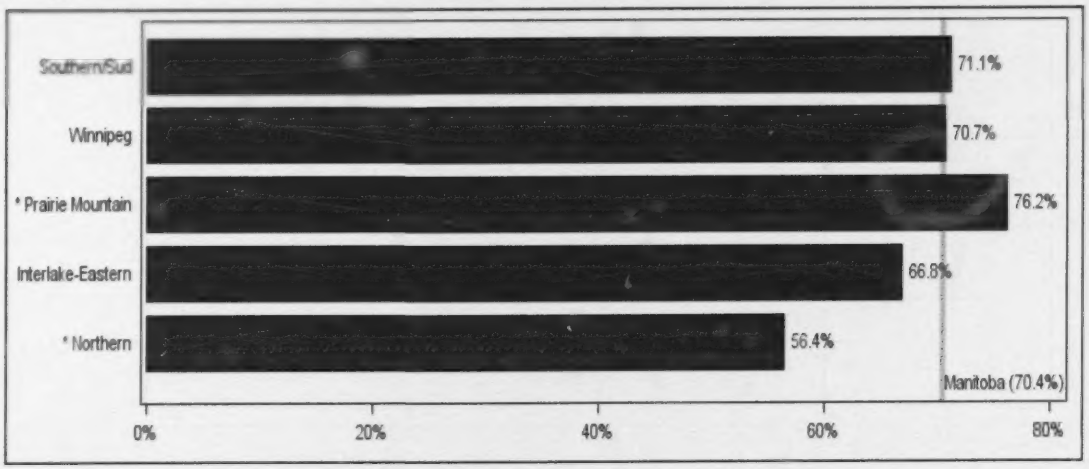


Figure 53: Age- and sex-adjusted percent of residents who used primary care physician services by RHA, 2015/2016

Figure 53 shows the age- and sex-adjusted percent of Manitobans who used primary care physician services by RHA of residence.

In 2015/2016, 70.4% of Manitoba residents saw a primary care physician at least once during the year. Residents of Northern Health Region appeared to have lower physician use for primary care. However, values for Northern Health Region are affected by missing data for services provided by salaried physicians and should be interpreted with caution.

Figure 54 shows the overall physician use in 2015/2016 by age and sex. Females had a higher use of physicians than males for all age groups over the age of 5 years.

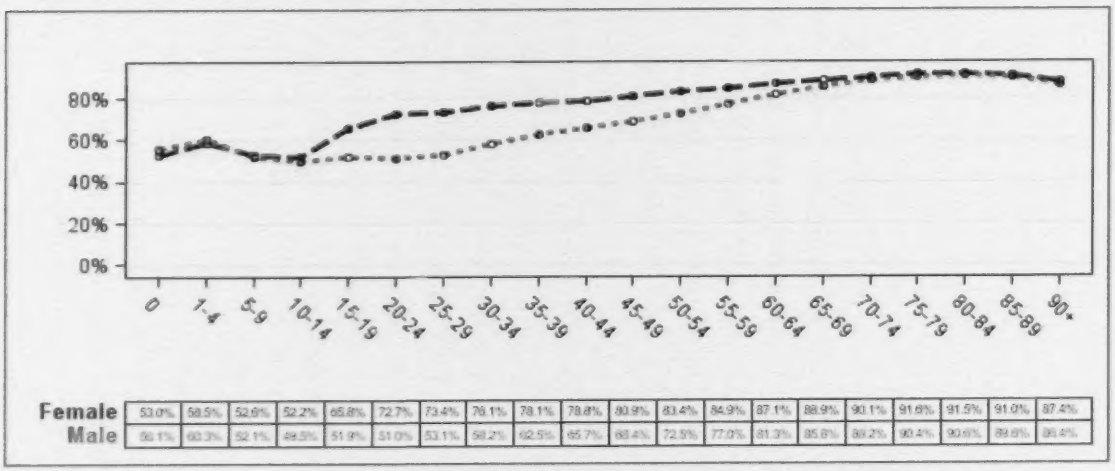


Figure 54: Crude percent of residents who used general physician services by age and sex, 2015/2016

Physician Use—Specialist Care

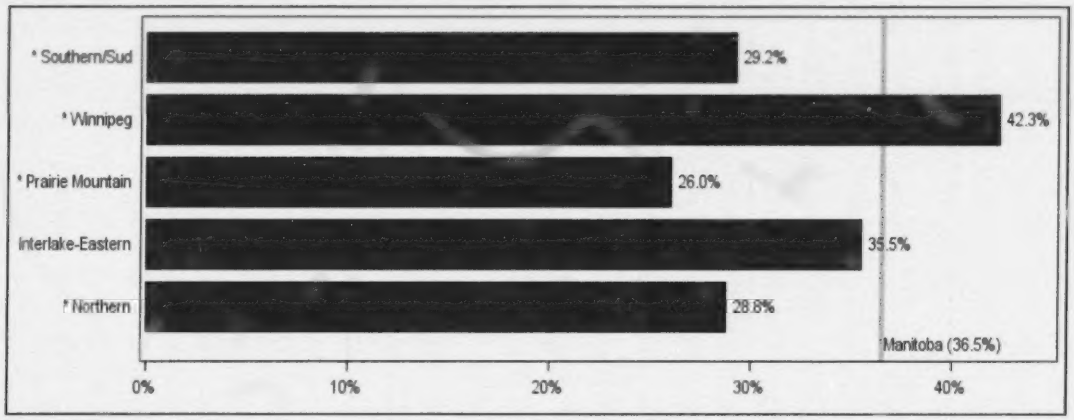


Figure 55: Age- and sex-adjusted percent of residents who used other physician services by RHA, 2015/2016

Figure 55 shows the age- and sex-adjusted percent of Manitobans who used specialist care services by RHA of residence.

In 2015/2016, 36.5% of Manitoba residents saw a specialist care physician at least once during the year. Residents of Prairie Mountain Health , Southern Health-Santé Sud and Northern Health Region appeared to have lower percent of physician use for specialist care. However, values for Northern Health Region are affected by missing data for services provided by salaried physicians and should be interpreted with caution.

Figure 56 shows the other physician use rate in 2015/2016 by age and sex. Females had a higher use of physicians than males for all age groups over the age of 15 years up to 65 years.

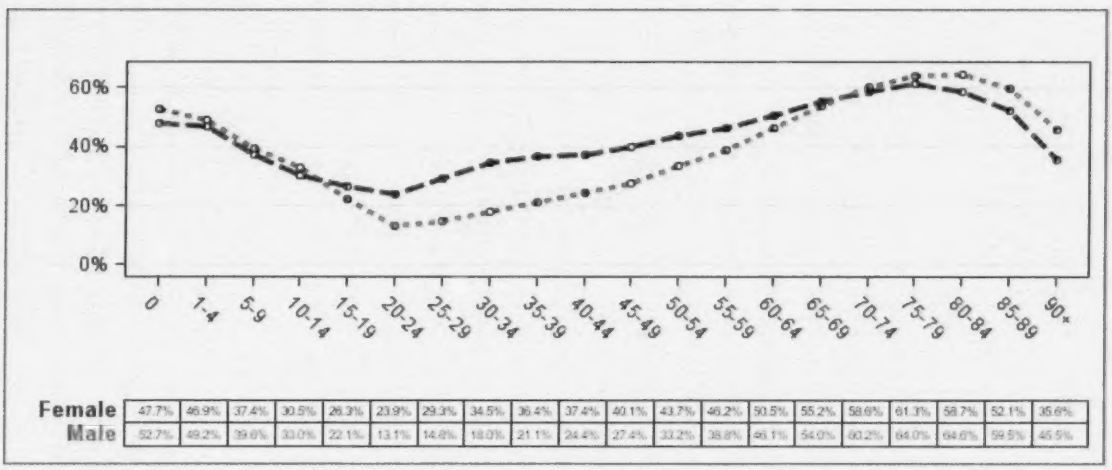


Figure 56: Crude percent of residents who used other physician services by age and sex, 2015/2016

Majority of Care

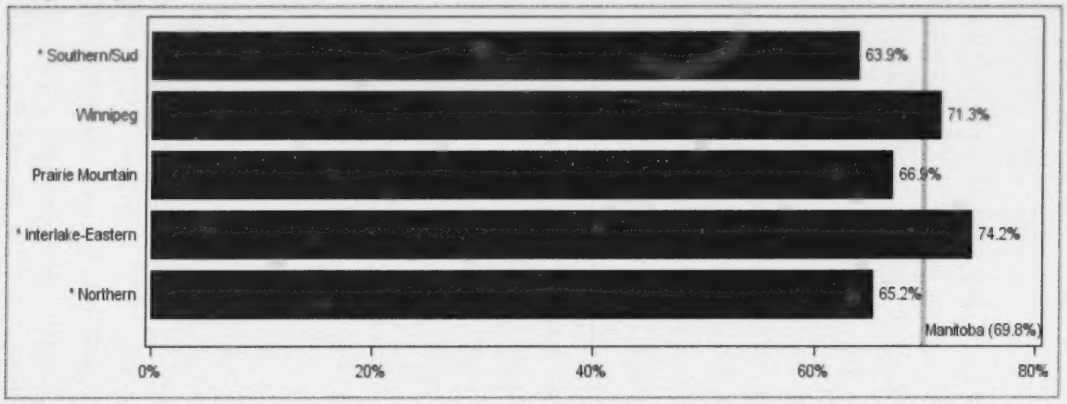


Figure 57: Age- and sex-adjusted percent of residents with more than 50% of ambulatory visits to the same physician by RHA, 2014/2015 to 2015/2016

Figure 57 shows the age- and sex-adjusted percent of Manitoba residents with more than 50% of ambulatory visits made to the same physician, by RHA of residence.

From 2014/2015 to 2015/2016, 69.8% of residents had more than 50% of their visits to the same physician. Northern Health Region and Southern Health-Santé Sud had a significantly lower majority of care compared to the Manitoba rate, while Interlake-Eastern RHA had a significantly higher majority of care.

Figure 58 shows the age- and sex-specific percent of residents with at least 50% of visits made to the same physician. Generally, majority of care was the same for both males and females. Manitoba females age 5 to 9 and Manitoba males age 20 to 24 had the lowest majority of care.

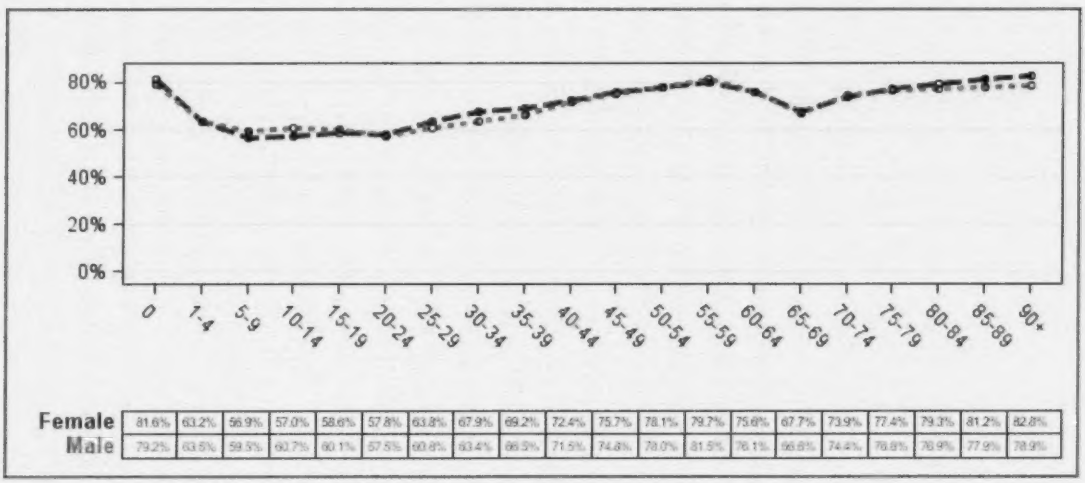


Figure 58: Crude percent of residents with more than 50% of ambulatory visits to the same physician, by age and sex, 2014/2015 to 2015/2016

Ambulatory Care Visits

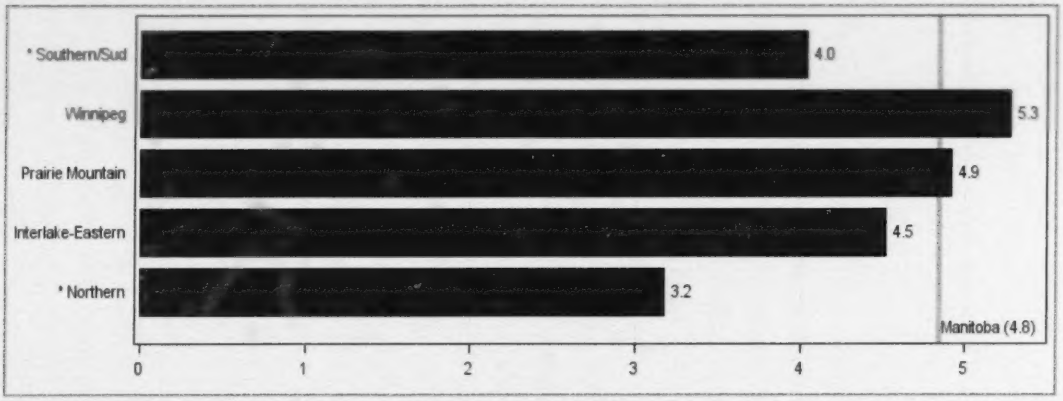


Figure 59: Age- and sex-adjusted average number of ambulatory care visits by RHA, 2015/2016

Figure 59 shows the age- and sex-adjusted average number of visits to a physician per Manitoba resident. Services provided to a patient while admitted to hospital have been excluded.

In 2015/2016, there was an average of about 5 visits to physicians per Manitoba resident. Northern Health region and Southern Health-Santé Sud's visit rate were significantly lower than the Manitoba visit rate.

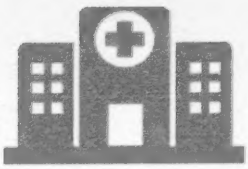
In Manitoba overall, the most common reason for a physician visit was for disorders of the nervous system and sense organs, representing 11.4% of all visits (Table 1).

♦ Please note that due to a revised definition, rates for this indicator are not comparable to those from previous years' reports.

Reason for Visit	Percentage
Nervous System & Sense Organs	11.4%
Circulatory	10.3%
Factors Influencing Health Status and Contact with Health Services	9.4%
Respiratory	9.1%
Mental Disorders	9.1%
Musculoskeletal System & Connective Tissue	8.5%
Symptoms, Signs, Ill-Defined Conditions	8.0%
Endocrine, Metabolic Disease, Immunologic Disorders	7.1%
Genitourinary	5.3%
Skin & Subcutaneous Tissue	5.3%
Injury & Poisoning	4.4%
Digestive	3.7%
Neoplasms	3.4%
Infectious and Parasitic Diseases	2.7%
Disease of Blood, Blood-Forming Organs	1.3%
Congenital Anomalies	0.5%
Pregnancy, Childbirth, Puerperium	0.3%
Conditions Orginating in Perinatal Period	0.0%

Table 1: Percentage of visits by reason, 2015/2016

Use of Hospital Services



The following section provides an overview of the use of hospital services, appropriateness of care and proportion of alternate level of care days in Manitoba. This includes use of hospitals, hospital separation rates, day surgery rates, hospitalizations for ambulatory care sensitive conditions and alternate level of care days.

In 2015/2016, there were 75 acute and chronic care facilities along with 2 long term psychiatric facilities.

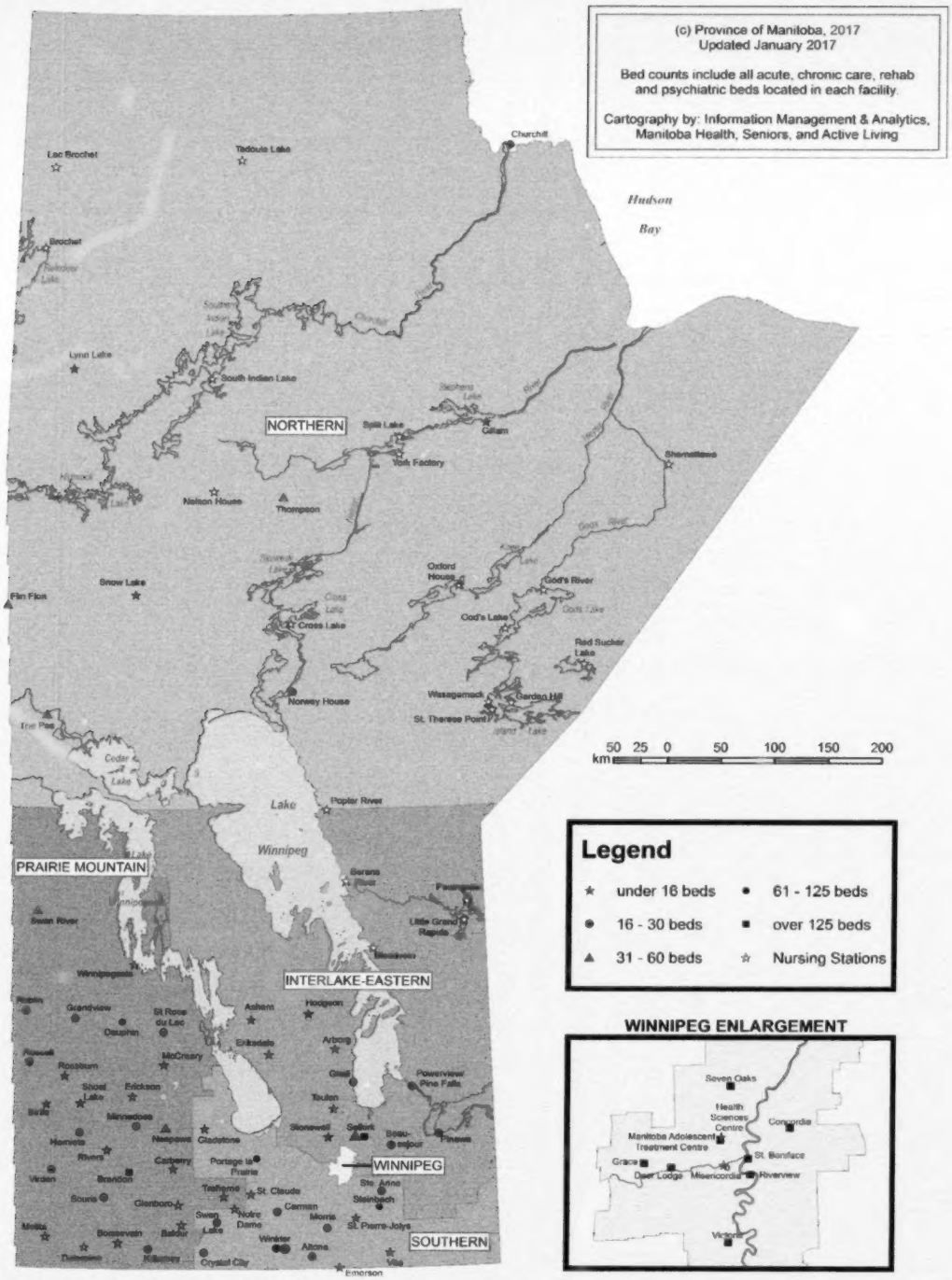
About 6% of Manitoba residents were admitted as an inpatient to a hospital in 2015/2016. In total, there were 111,312 inpatient hospitalizations.

There were a total of 102,899 hospital day surgery visits among Manitoba residents in 2015/2016. Nearly half of these visits were for procedures involving the digestive system.

Ambulatory care sensitive conditions (ACSC) is a measure of access to appropriate medical care. While not all admissions for these conditions are avoidable, significantly elevated rates often reflect problems obtaining access to primary care. In 2015/2016, the rate of hospitalization for ACSC was 6.7 per 1,000 residents.

Alternate level of care (ALC) days are inpatient days in which a patient no longer requires the level of care their care setting provides, and where the patient is awaiting discharge to a more appropriate non-acute care setting. In 2015/2016, 4.1% of all hospitalized cases had one or more ALC days associated with them.

Map of Hospitals by Facility Size



Use of Hospitals

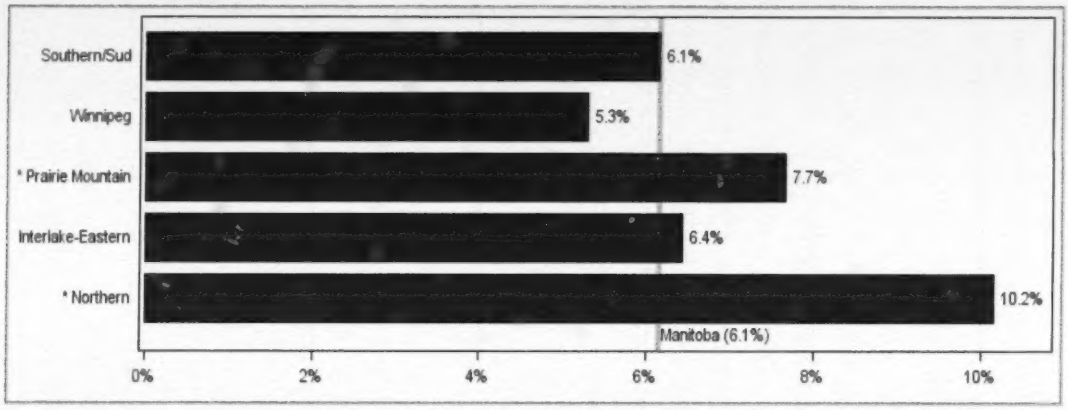


Figure 60: Age- and sex-adjusted percent of residents admitted to hospital by RHA, 2015/2016

Figure 60 shows the age- and sex-adjusted percent of Manitobans who were admitted to hospital by RHA of residence.

In 2015/2016, 6.1% of Manitoba residents were admitted at least once to a hospital.

Northern and Prairie Mountain Health Regions had significantly higher percentages of residents with one or more admissions than Manitoba overall.

Figure 61 shows the hospital use rate in 2015/2016 by age and sex. Females age 10 to 54 have higher hospital use than males in the same age group. This is mainly attributed to women admitted to hospital for obstetrical services. Rates for both genders increase with age at 55 years, with senior males having a higher rate.

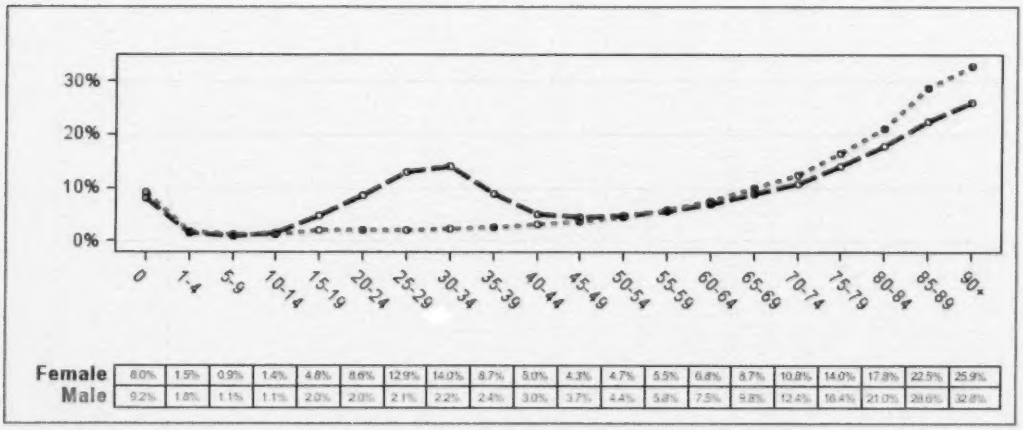


Figure 61: Crude percent of residents admitted to hospital by age and sex, 2015/2016

Inpatient Hospital Separations

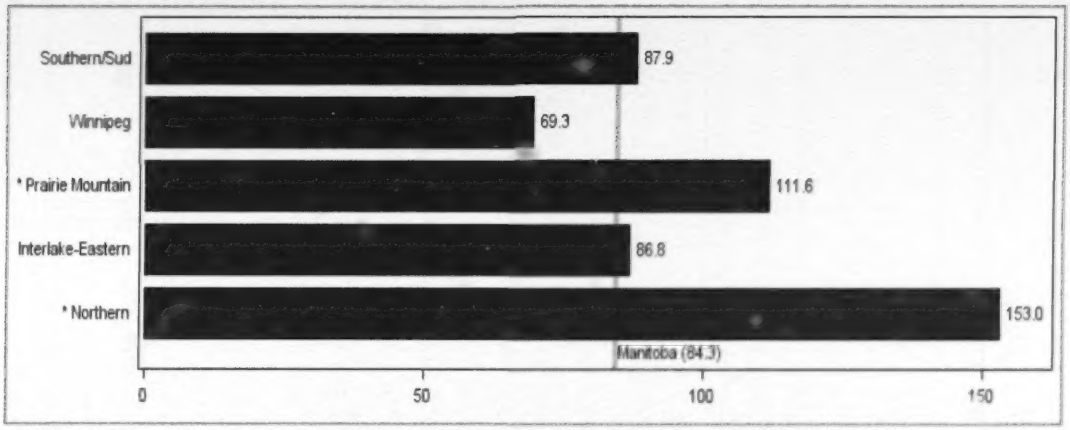


Figure 62: Age- and sex-adjusted rate of separation for inpatient hospitalizations per 1,000 residents by RHA, 2015/2016

Figure 62 shows the age- and sex-adjusted rate of separation for inpatient hospitalizations, per 1,000 residents. A separation is defined as anytime a patient leaves a facility because of discharge, transfer or death.

In 2015/2016, there were 111,312 inpatient separations among Manitoba residents, representing a rate of 84.3 per 1,000 Manitoba residents. Rates in Northern Health Region and Prairie Mountain Health were significantly higher than Manitoba overall.

Reason for Hospitalization	Percentage of Hospitalizations
Pregancy, Childbirth & Puerperium	16.1%
Circulatory System	10.6%
Digestive System	10.5%
Factors Influencing Health Status & Contact with Health Services	9.4%
Injuring & Poisoning	8.7%
Respiratory	8.1%
Musculoskeletal System & Connective Tissue	5.8%
Mental & Behavioural Disorders	5.4%
Neoplasms	5.3%
Genitourinary System	5.1%
Symptoms, Signs and Abnormal Clinical/Lab Findings	4.6%
Endocrine, Nutritional and Metabolic Diseases	2.9%
Infectious & Parasitice Diseases	2.3%
Skin & Subcutaneous Tissue	1.6%
Diseases of the Nervous System	1.5%
Diseases of Blood & Blood Forming Organs	0.7%
Congenital Anomalies	0.5%
Eye and Adnexa	0.5%
Conditions Originating in Perinatal Period	0.3%
Ear & mastoid process	0.2%

In Manitoba overall, the most common reason for inpatient hospitalization was pregnancy, representing 16.1% of inpatient hospitalizations. This was followed by hospitalizations for issues related to the circulatory system at 10.6% (Table 2).

Table 2: Percentage of inpatient hospital separations by reason, 2015/2016

Hospitalizations by Service Type

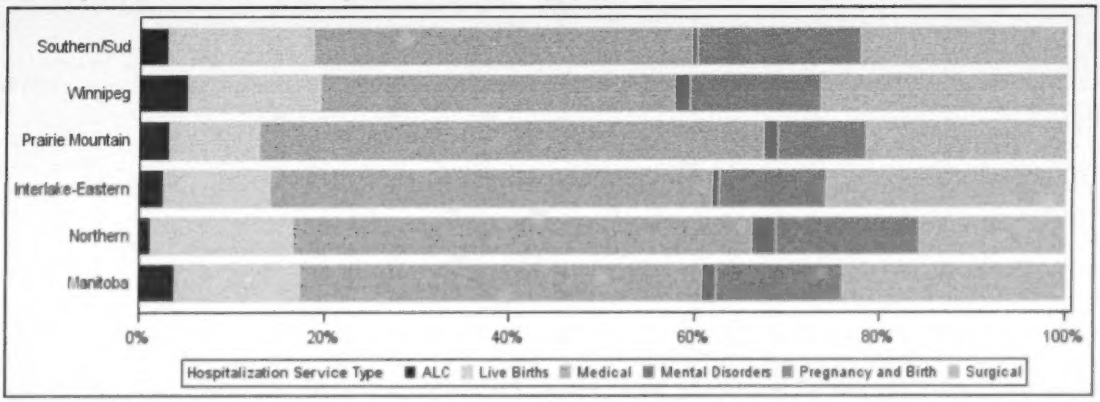


Figure 63: Percentage of hospitalizations by service type, by RHA of residence, 2015/2016

Figure 63 shows the percentage of Manitobans who were admitted to hospital by service type and RHA of residence.

In 2015/2016, Prairie Mountain Health residents had a higher percentage of hospitalization for medical services. Percentage of ALC hospitalization for Winnipeg residents was higher than Manitoba overall.

Figure 64 shows the percentage of Manitobans who were admitted to hospital by service type and RHA of hospital. In 2015/2016, Interlake-Eastern RHA hospitals had the highest hospitalization for medical services while hospitals in Winnipeg RHA had the highest hospitalization for surgical services.

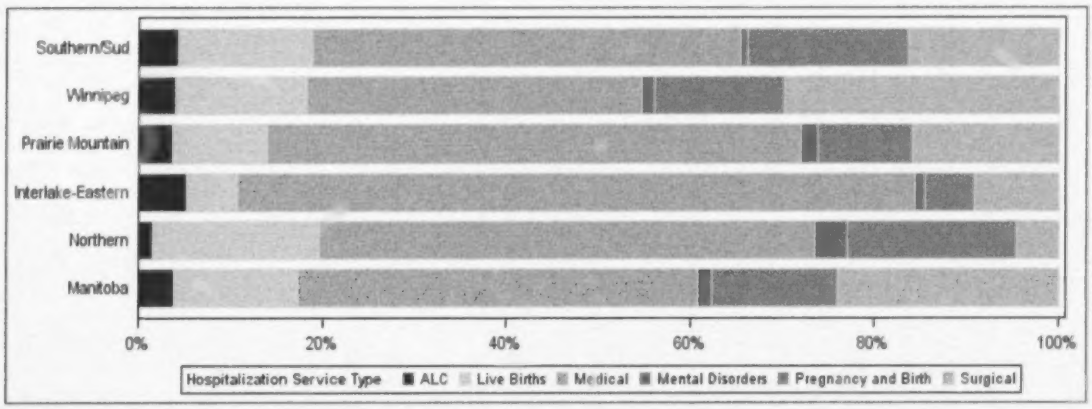


Figure 64: Percentage of hospitalizations by service type, by RHA of hospital, 2015/2016

Day Surgery

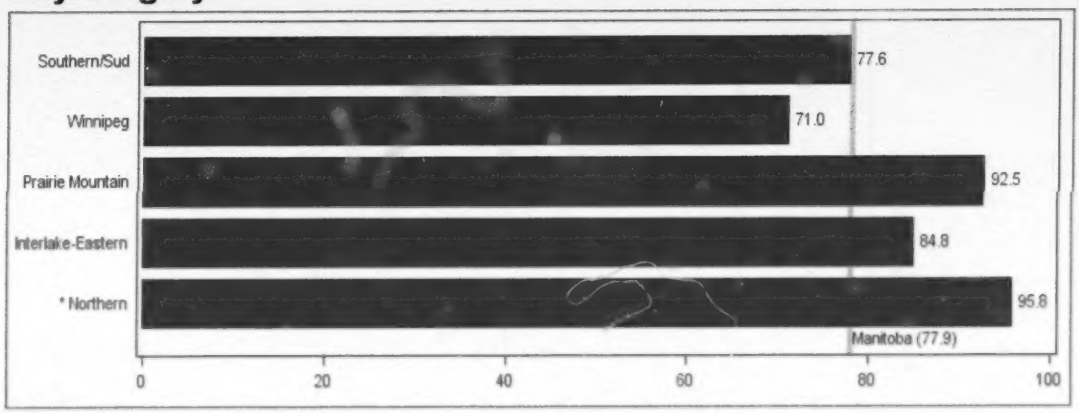


Figure 65: Age- and sex-adjusted rate of day surgery hospitalization per 1,000 residents by RHA, 2015/2016

Figure 65 shows the age- and sex-adjusted rate of day surgery hospitalization per 1,000 residents. Day surgery is defined as surgical services received on an outpatient basis.

In 2015/2016, there were 102,899 day surgery hospitalizations among Manitoba residents, representing a rate of 77.9 per 1,000 Manitoba residents.

The most common reason of day surgery hospitalization in Manitoba was for an intervention on the digestive tract, representing 43.7% of all day surgery hospitalizations (Table 3).

Type of Day Surgery Intervention	% of Day Surgery Hopitalizations
Interventions on the Digestive and Hepatobiliary Tracts and Other Sites within the Abdominal Cavity NEC	43.7%
Interventions on the Eye and Ocular Adnexa	12.2%
Interventions on the Musculoskeletal System	12.0%
Interventions on the Urinary System	6.2%
Interventions on the Cardiovascular System	5.8%
Interventions on the Orocraniofacial Region	5.1%
Interventions Female Genital Organs	4.0%
Interventions on the Skin, Subcutaneous Tissue and Breast	2.9%
Obstetrical and Fetal Interventions	2.8%
Interventions on the Nervous System	1.4%
Interventions Male Genital Organs	1.4%
Interventions on the Respiratory System	1.2%
Interventions on the Ear and Mastoid (process)	1.0%
Interventions on the Lymphatic System	0.3%
Interventions Body NEC	0.1%

Table 3: Percentage of day surgery hospitalization by reason, 2015/2016

Hospitalization for Ambulatory Care Sensitive Conditions

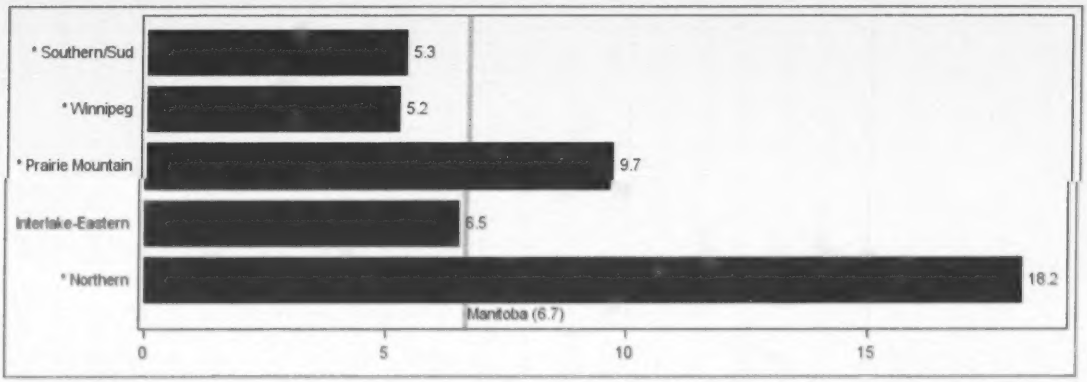


Figure 66: Age- and sex-adjusted rate of ambulatory care sensitive conditions per 1,000 residents by RHA, 2015/2016

Figure 66 shows the age- and sex-adjusted rate of hospitalization for ambulatory care sensitive conditions (ACSC) by RHA of residence. ACSC are a set of conditions comprised of 25 diseases/ diagnoses which have been identified as observably responsive to primary care. ACSC hospitalizations accordingly can function as an indirect measure of primary care access. Although significantly higher rates are presumed to reflect problems obtaining access to primary care, not all admissions for these conditions are avoidable.

Ambulatory Care Sensitive Condition	% of Total ACSC Hospitalizations
Bacterial Pneumonia	16.8%
Chronic Obstructive Pulmonary Disease	16.1%
Diabetes	12.9%
Kidney/Urinary Infections	11.3%
Congestive Heart Failure	10.8%
Cellulitis	8.7%
Asthma	3.9%
Epilepsy	3.8%
Angina	2.8%
Convulsions	2.7%
Severe ENT Infections	1.9%
Dehydration/Volume Depletion	1.5%
Dental Conditions	1.3%
Hypertension	1.1%
Pelvic Inflammatory Disease	1.1%
Gastroenteritis	1.0%
Pulmonary Tuberculosis	1.0%
All Other ACS Conditions	1.3%

Table 4: Percentage of ambulatory care sensitive conditions by reason, 2015/2016

In 2015/2016, the rate of hospitalization for ACSC was 6.7 per 1,000 Manitoba residents. Hospitalization rates in Northern and Prairie Mountain Health regions were significantly higher than Manitoba overall, while the rates in Winnipeg RHA and Southern Health-Santé Sud were significantly lower.

The most common ACSC hospitalization among Manitoba residents was bacterial pneumonia, representing 16.8% of all ACSC hospitalizations (Table 4).

Alternate Level of Care

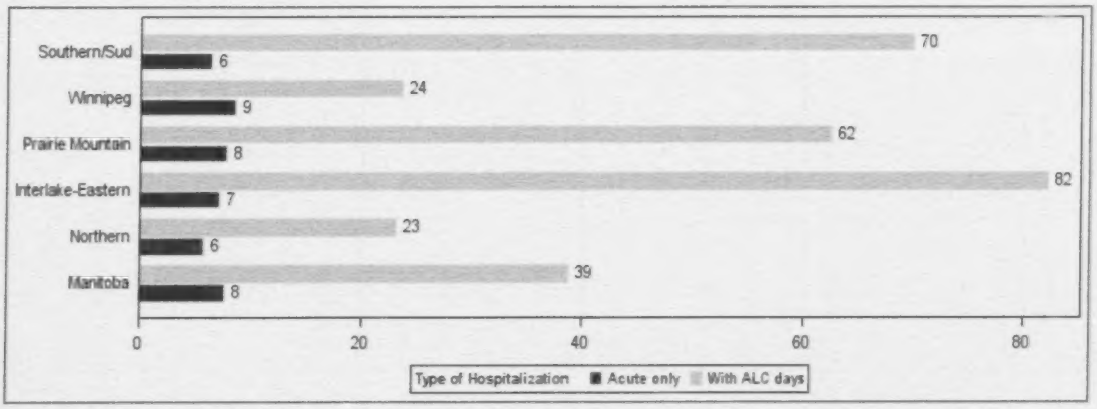


Figure 67: Average length of stay for alternate level of care and acute care-only patient stays by RHA of hospital 2015/2016

Figure 67 shows the average lengths of stay for acute care-only hospitalizations, and for hospitalizations where a portion of the stay included alternate level of care (ALC). Inpatient days are identified as ALC when a patient no longer requires the level of care their care setting provides, and where the patient is awaiting discharge to a more appropriate non-acute care setting, such as a personal care home. The average length of stay for an ALC case was approximately 39 days, compared to 8 days for a non-ALC acute case.

Figure 68 shows the crude proportion of total hospitalizations with and without associated ALC days. In 2015/2016, there were 5,056 hospitalizations in which a portion of the stay included ALC days, representing 4.1% of all hospitalized cases.

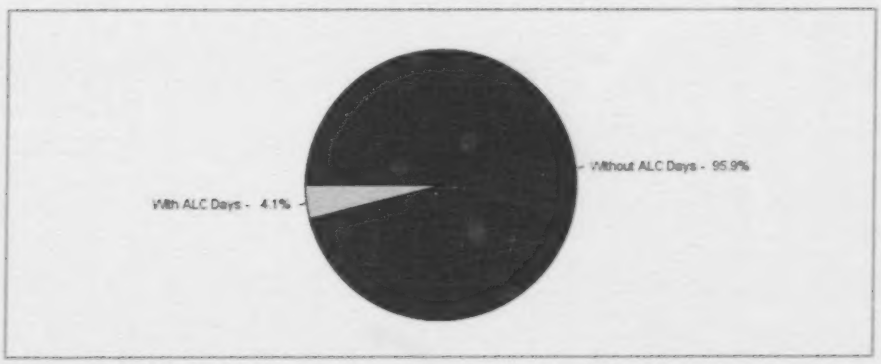
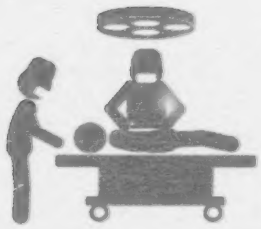


Figure 68: Crude percent of total hospitalized cases associated with and without alternate level of care days, 2015/2016

High Profile Surgeries



The following section provides an overview of high profile surgery rates for the Manitoba population, including rates for coronary artery bypass grafts (CABG), hip replacement surgeries, knee replacement surgeries, cataract surgeries and paediatric dental extractions.

For the period of 2011/2012 to 2015/2016, there was about 1 coronary artery bypass graft surgery and nearly 4 Percutaneous Coronary Intervention surgeries per 1,000 Manitoba residents age 40 and older.

In 2015/2016, there were approximately 2 hip replacement surgeries and 3 knee replacement surgeries per 1,000 Manitoba residents age 40 and older.

In 2014/2015, there were about 28 cataract surgeries per 1,000 Manitoba residents age 50 and older.

There were nearly 11 dental extraction surgeries per 1,000 children under the age of six in 2015/2016.

Coronary Artery Bypass Graft Surgery and Percutaneous Coronary Intervention Surgery

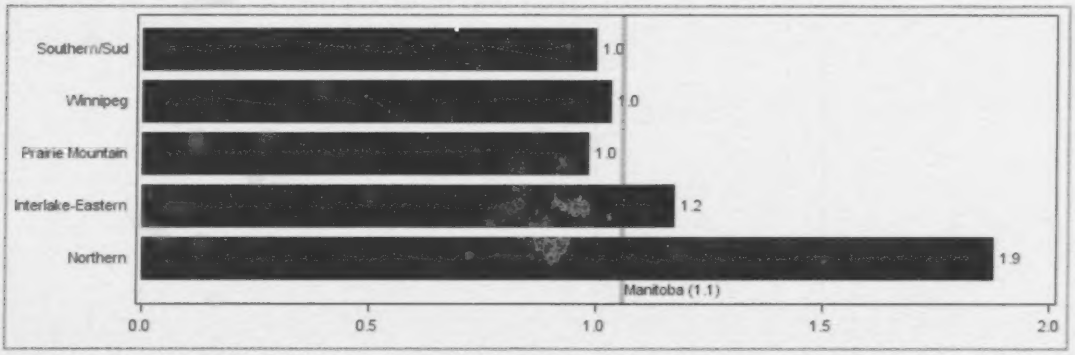


Figure 69: Age- and sex-adjusted coronary artery bypass graft surgery rate per 1,000 residents age 40 and older by RHA, 2011/2012 to 2015/2016

Figure 69 shows the age- and sex-adjusted coronary artery bypass graft (CABG) surgery rate among Manitoba residents age 40 and older, by RHA of residence.

For the period of 2011/2012 to 2015/2016, an average of 641 coronary artery bypass surgeries were performed on Manitoba residents per year, representing a rate of 1.1 surgeries per 1,000 for those age 40 and older.

Figure 70 shows the age- and sex-adjusted Percutaneous Coronary Intervention (PCI) surgery rate among Manitoba residents age 40 and older, by RHA of residence. In cases amenable to treatment with less-invasive procedures, percutaneous coronary intervention (PCI) is an alternative intervention to improve blood flow to the heart muscle.

For the period of 2011/2012 to 2015/2016, an average of 2,375 percutaneous coronary intervention surgeries were performed on Manitoba residents per year, representing a rate of 3.9 surgeries per 1,000 for those age 40 and older.

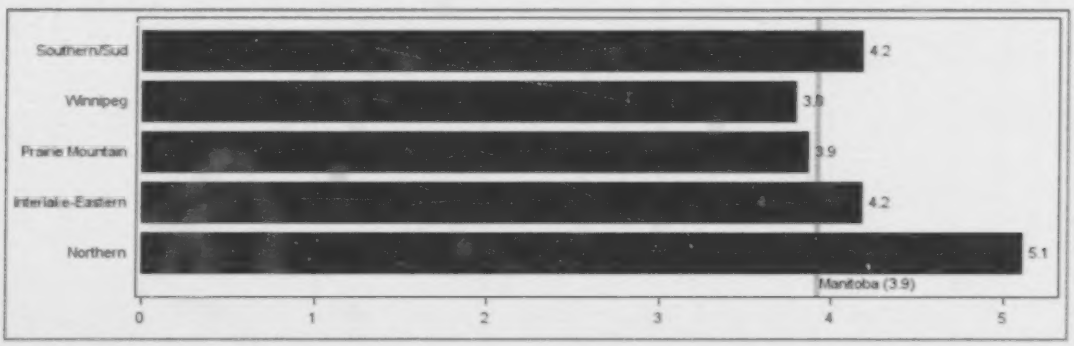


Figure 70: Age- and sex-adjusted Percutaneous Coronary Intervention (PCI) surgery rate per 1,000 residents age 40 and older by RHA, 2011/2012 to 2015/2016

Hip Replacement

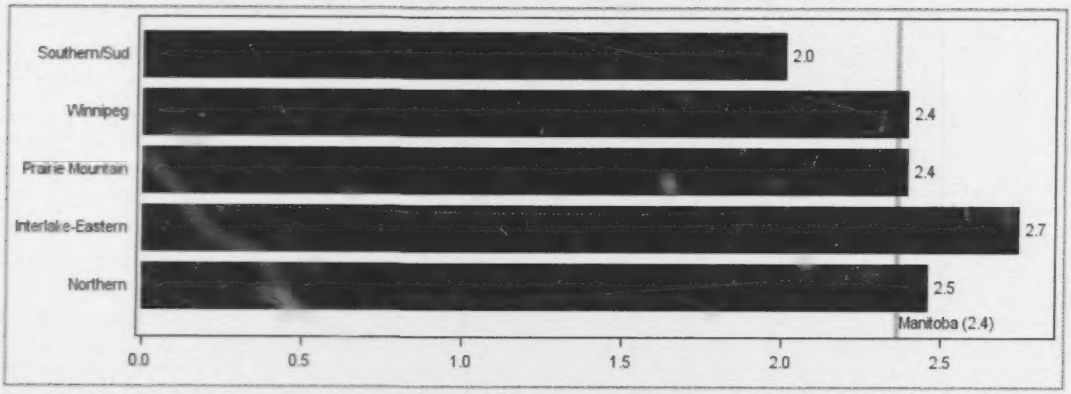


Figure 71: Age- and sex-adjusted hip replacement surgery rate per 1,000 residents age 40 and older by RHA, 2015/2016

Figure 71 shows the age- and sex-adjusted hip replacement surgery rate among Manitoba residents age 40 and older, by RHA of residence.

In 2015/2016, there were 1,465 hip replacement surgeries performed on Manitoba residents, representing a rate of 2.4 per 1,000 for those age 40 and older.

Figure 72 shows the hip replacement surgery rate in Manitoba over time. The hip replacement surgery rate in Manitoba has been relatively stable since 2006/2007.

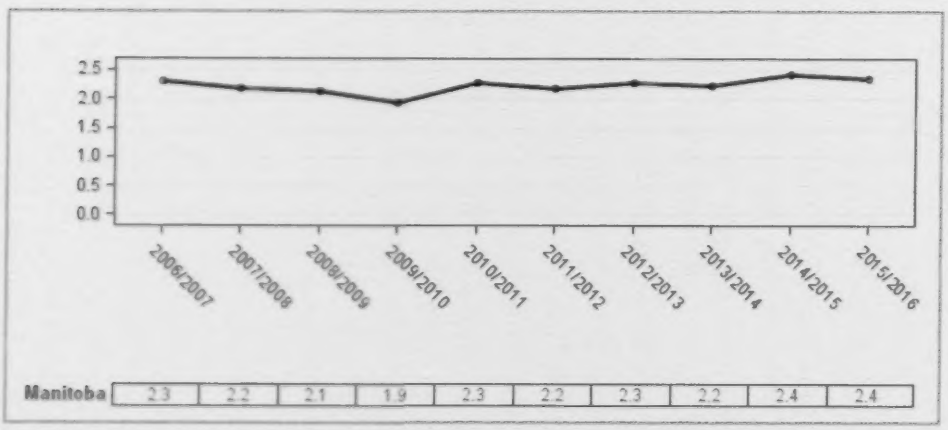


Figure 72: Hip replacement surgery rate per 1,000 residents age 40 and older by fiscal year

Knee Replacement

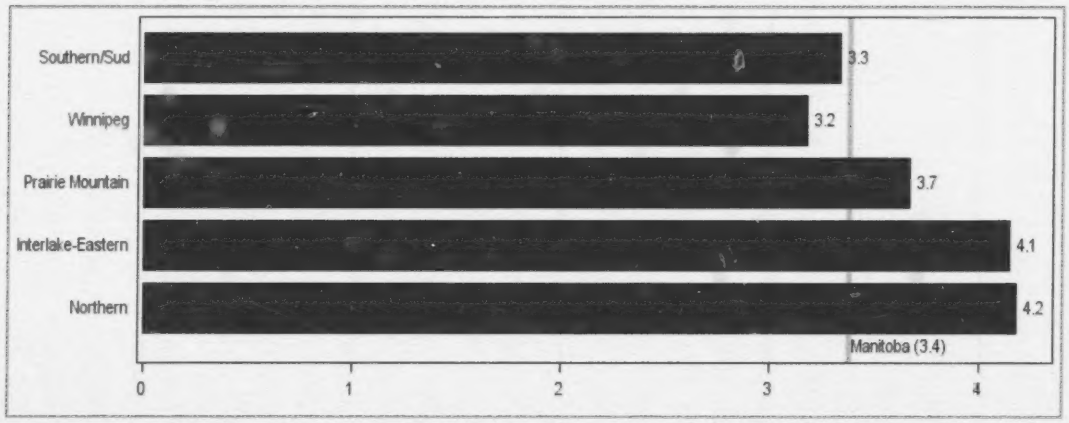


Figure 73: Age- and sex-adjusted knee replacement surgery rate per 1,000 residents age 40 and older by RHA, 2015/2016

Figure 73 shows the age- and sex-adjusted total knee replacement surgery rate among Manitoba residents age 40 and older, by RHA of residence.

In 2015/2016, there were 2,097 total knee replacement surgeries performed on Manitoba residents, representing a rate of 3.4 per 1,000 for those age 40 and older. None of the age- and sex-adjusted rates by RHA were significantly different than Manitoba overall.

Figure 74 shows knee replacement surgery rate in Manitoba over time. The knee replacement surgery rate in Manitoba has been relatively stable since 2006/2007.

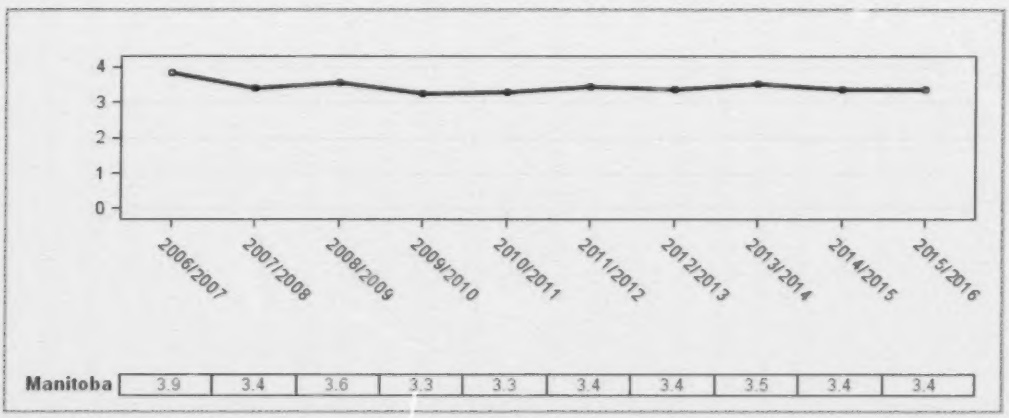


Figure 74: Knee replacement surgery rate per 1,000 residents age 40 and older by fiscal year

Cataract Surgery

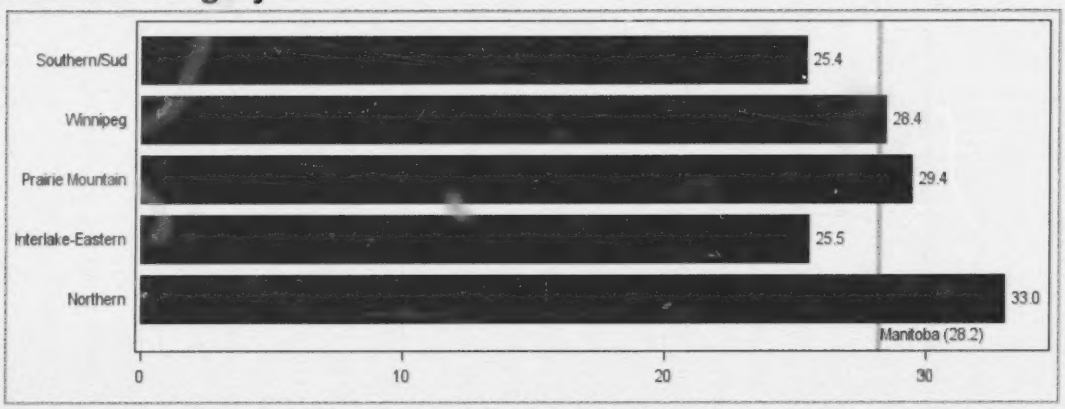
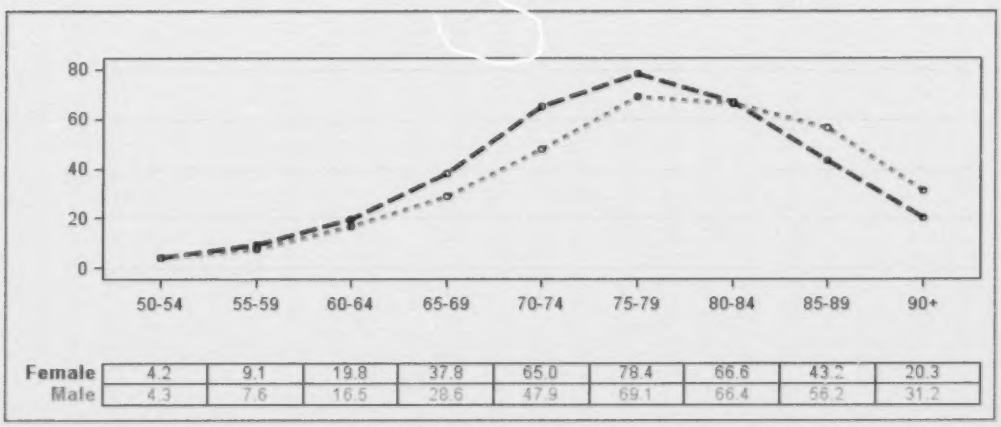


Figure 75: Age- and sex-adjusted rate of cataract surgery per 1,000 residents age 50 and older by RHA, 2014/2015

Figure 75 shows the age- and sex-adjusted rate for cataract surgery among Manitoba residents age 50 and older by RHA of residence.

In 2014/2015, there were 12,104 cataract surgeries performed on Manitoba residents, representing a rate of 28.2 residents per 1,000 for those age 50 and older. None of the age- and sex- adjusted rates by RHA were significantly different than Manitoba overall.

Figure 76 shows cataract surgery rate by age and sex. For 2014/2015 the rate for females was consistently higher than males between the ages of 50 and 84. The rate of surgery for males is higher for those age 85 and older.



	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+
Female	4.2	9.1	19.8	37.8	65.0	78.4	66.6	43.2	20.3
Male	4.3	7.6	16.5	28.6	47.9	69.1	66.4	56.2	31.2

Figure 76: Age- and sex-adjusted rate of cataract surgery per 1,000 residents age 50 and older by RHA, 2014/2015

Paediatric Dental Extraction

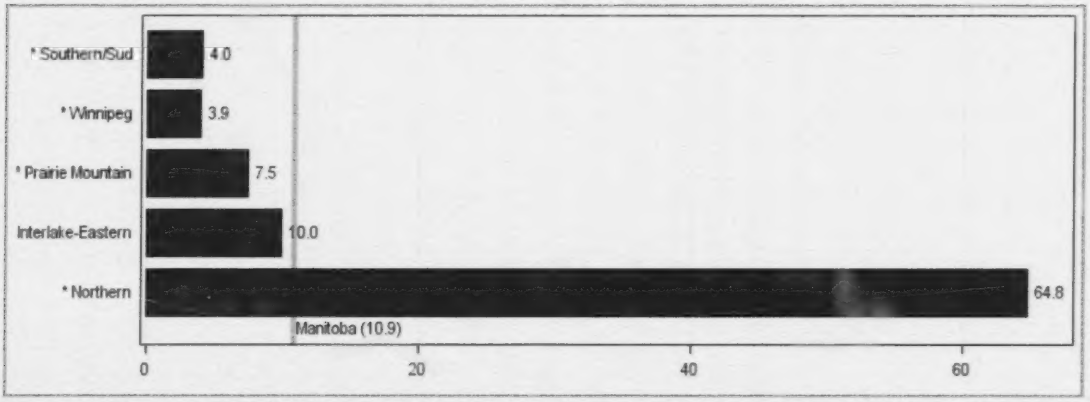
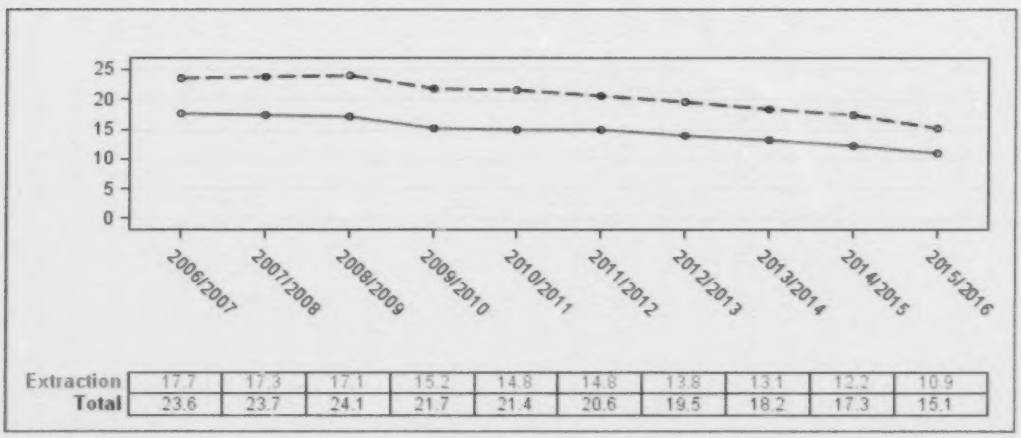


Figure 77: Age- and sex-adjusted rate of dental extraction for children under the age of six per 1,000 children under the age of six by RHA, 2015/2016

Figure 77 shows the age- and sex-adjusted rate of dental extractions among Manitoba children under the age of six by RHA of residence.

In 2015/2016, there were 1,095 hospitalizations for dental extractions among Manitoba children under the age of six, representing a rate of 10.9 hospitalizations per 1,000 children. The hospitalization rate in Northern Health Region was significantly higher than Manitoba overall, with Northern Health Region having a hospitalization nearly 6 times that of the rate in Manitoba.

Figure 78 shows the rate of paediatric dental extractions as well as all total paediatric dental procedures over time. The rates for both have been steadily decreasing since 2006/2007.



	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Extraction	17.7	17.3	17.1	15.2	14.8	14.8	13.8	13.1	12.2	10.9
Total	23.6	23.7	24.1	21.7	21.4	20.6	19.5	18.2	17.3	15.1

Figure 78: Crude rate of paediatric dental extractions and total paediatric dental surgeries by fiscal year

Women's Reproductive Health

The following section provides an overview of selected women's reproductive health indicators, including hysterectomy rates, proportion of deliveries by caesarean section and proportion of vaginal births after caesarean sections.

In 2015/2016, of every 1,000 Manitoba women between the ages of 20 to 84 approximately 3 had a hysterectomy. Provincially, 23.2% of total deliveries were caesarean deliveries among women between the ages of 15 to 54, and 30.1% of women having a previous caesarean section delivered vaginally.

Hysterectomy

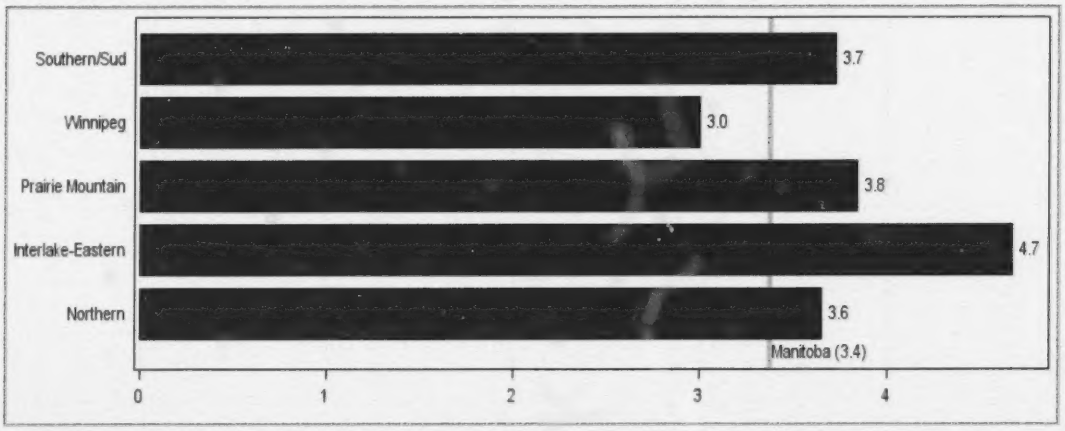


Figure 79: Age-adjusted hysterectomy rate per 1,000 female residents ages 20 to 84 by RHA, 2015/2016

Figure 79 shows the age-adjusted hysterectomy rate among Manitoba female residents ages 20 to 84 by RHA of residence.

In 2015/2016, there were 1,692 females that had a hysterectomy, representing a rate of 3.4 hysterectomies per 1,000 female population ages 20 to 84. None of the age-adjusted rates by RHA were significantly different than Manitoba overall.

In Manitoba overall, the largest proportion (38.3%) of hysterectomies were performed on females between the ages of 40 to 49 (Figure 80).

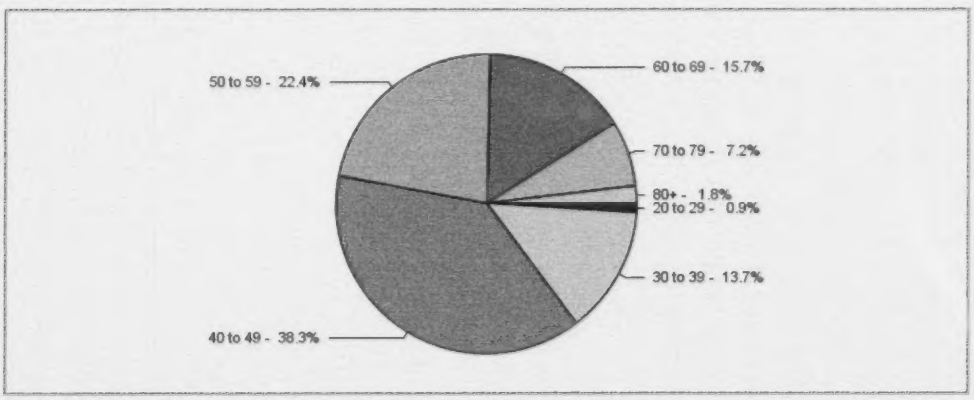


Figure 80: Hysterectomies performed by age group, 2015/2016

Caesarean Section

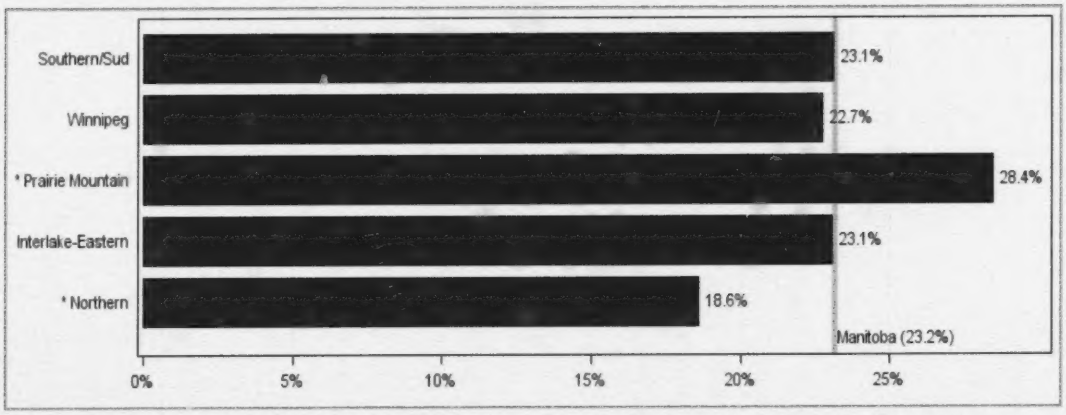


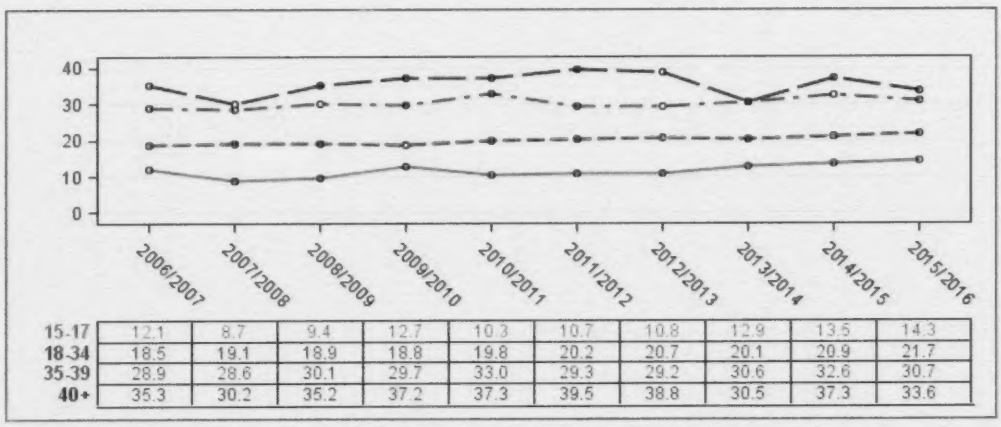
Figure 81: Age-adjusted percent of caesarean sections for females delivering ages 15 to 54 by RHA, 2015/2016

Figure 81 shows the age-adjusted percentage of caesarean sections among total deliveries by Manitoba females ages 15 to 54 by RHA of residence.

In 2015/2016, there were a total of 3,750 caesarean sections among Manitoba females ages 15 to 54, representing 23.2% of total deliveries for females in the same age group.

Prairie Mountain Health had a significantly higher percentage of caesarean sections than Manitoba overall, while the percentage in Northern Health Region was significantly lower.

Figure 82 shows the percent of caesarean sections among total deliveries over time by age group. The proportion of caesarean sections for most age groups has remained stable over time with the exception of those women 40 and older. From 2006/2007 to 2015/2016 the proportion of caesarean sections for women 40 and older were generally higher than all other age groups.



	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
15-17	12.1	8.7	9.4	12.7	10.3	10.7	10.8	12.9	13.5	14.3
18-34	18.5	19.1	18.9	18.8	19.8	20.2	20.7	20.1	20.9	21.7
35-39	28.9	28.6	30.1	29.7	33.0	29.3	29.2	30.6	32.6	30.7
40+	35.3	30.2	35.2	37.2	37.3	39.5	38.8	30.5	37.3	33.6

Figure 82: Percent of Caesarean Sections for females delivering by age group and fiscal year.

Vaginal Birth after Caesarean Section

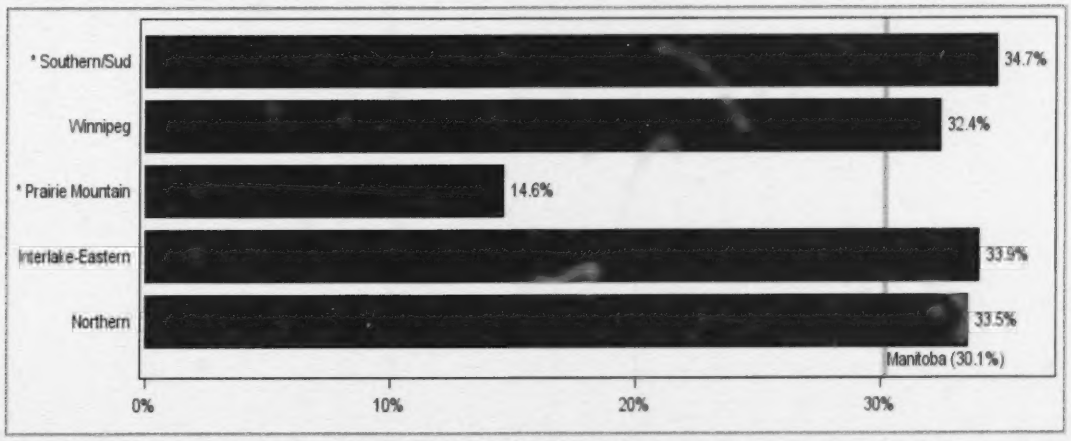


Figure 83: Age-adjusted percent of vaginal births after caesarean sections for females delivering ages 15 to 54 by RHA, 2011/2012 to 2015/2016

Figure 83 shows the age-adjusted percent of vaginal births among Manitoba females ages 15 to 54 who previously had a caesarean section, by RHA of residence.

On average, there were 582 vaginal births after caesarean sections by Manitoba females ages 15 to 54 each year for the period of 2011/2012 to 2015/2016. This represented 30.1% of females who gave birth after a previous caesarean section.

The majority of women (62.2%) who had a vaginal birth after previous Caesarean section were among women ages 25 to 34 (Figure 84).

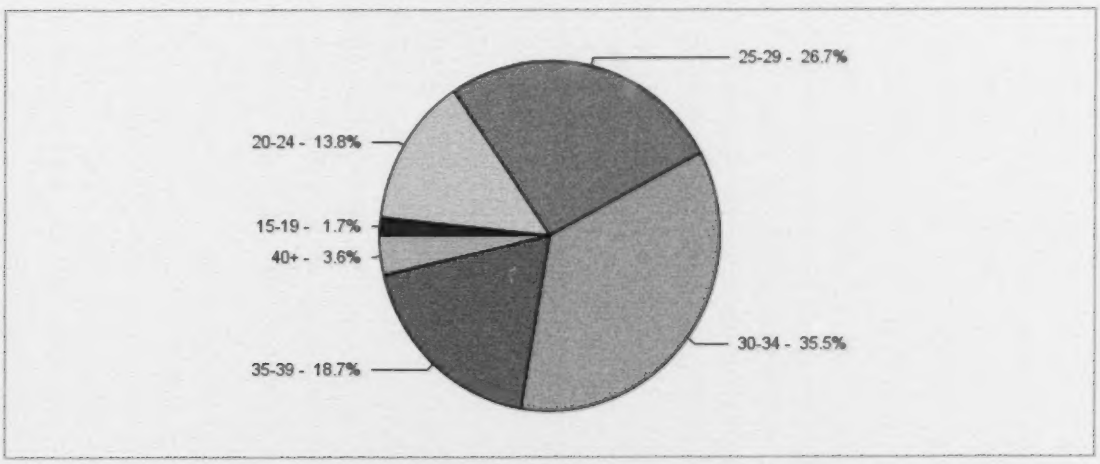


Figure 84: Percent of vaginal births after caesarean section by age group, 2011/2012 to 2015/2016

Use of Home Care Services

The following section provides an overview of the home care program in Manitoba. The home care program has the responsibility for the development and implementation of a comprehensive range of in-home services. The program also maintains and manages the assessment and waiting list for personal care home placement in each regional health authority.

This section includes statistics on the average number of clients receiving co-ordinated care and the average number of clients receiving services and assessments for admission to the home care program.

In 2015/2016, there were 16,340 Manitoba residents were admitted to home care, while 15,532 were discharged.

Total Number of Clients in Home Care at March 31, 2016

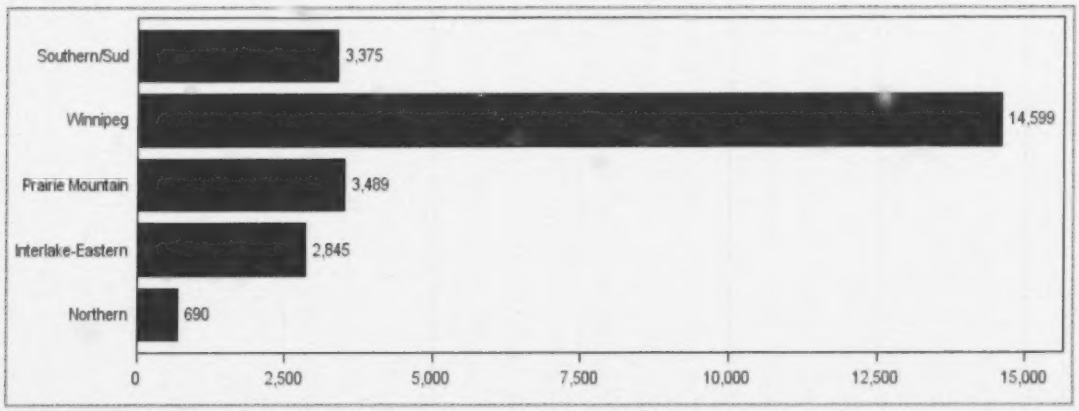


Figure 85: Total number of clients in Home Care at March 31, 2016

Figure 85 shows the total number of clients receiving coordinated home care services at March 31, 2016.

On March 31, 2016, there was a total of 24,998 clients in home care. Of these, about 58% of clients resided in Winnipeg Health Region.

Number of Assessments for Admission, Admissions and Discharges

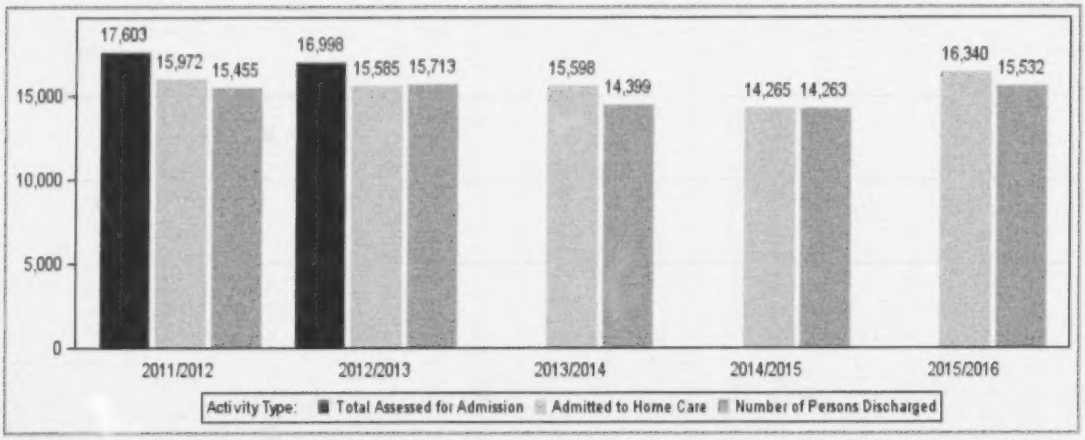


Figure 86: Number of assessments for admission, admissions and discharges, 2011/2012 to 2015/2016

Figure 86 shows the number of assessments for admission to the home care program, as well as admissions to and discharges from the home care program.

In 2015/2016 16,340 clients were admitted and 15,532 clients were discharged.

- Please note that the number of assessments is not available from 2013/2014 to 2015/2016.

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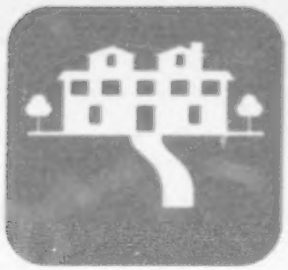


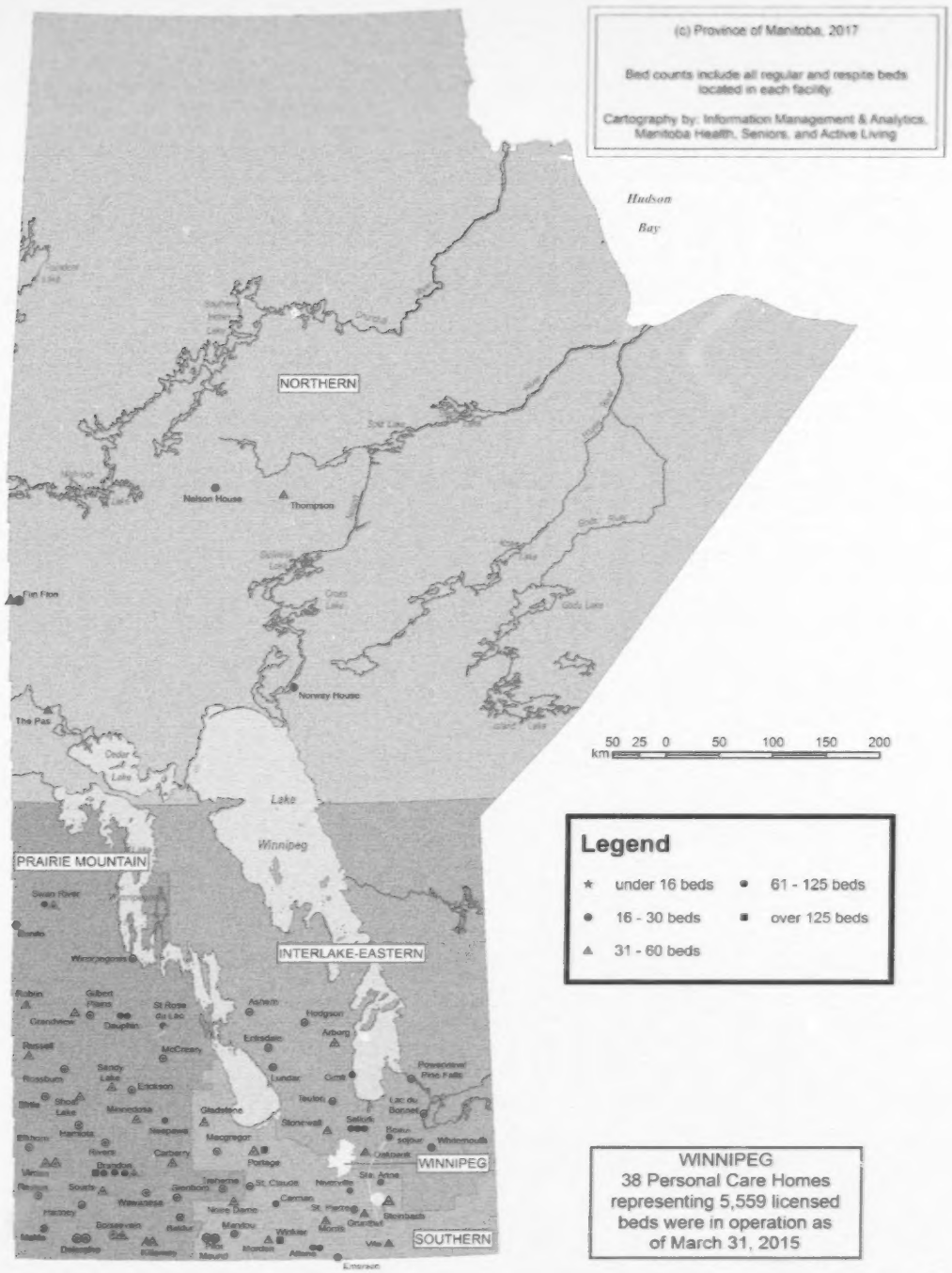
Use of Personal Care Homes

The following section provides an overview of personal care home (PCH) and respite care in Manitoba. This includes PCH admissions, median wait time for admission, and median length of stay.

PCHs are residential facilities which are predominately intended for adults age 75 and older that may have a chronic condition, and for residents with a disability. In 2015/2016, there were 125 PCHs in Manitoba.

In Manitoba, 3.0% of the population age 75 and older were admitted to a PCH from 2014/2015 to 2015/2016. The median wait time for placement into a PCH was approximately 7 weeks, and the median length of time a resident spent in PCH was 2 years. Length of stay is associated with level of care on admission, as sicker patients stay less time in a PCH than healthier patients do.

Map of Personal Care Homes by Facility Size



Personal Care Home Admissions

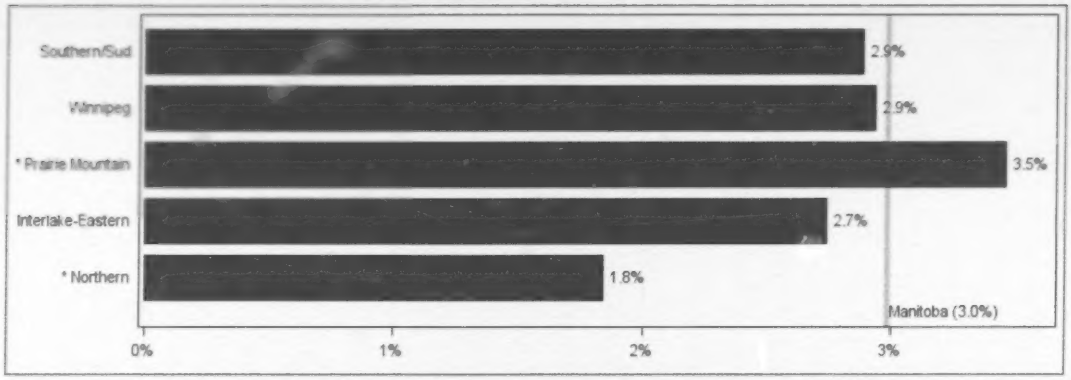


Figure 87: Age- and sex-adjusted percent of residents age 75 and older admitted to a personal care home by RHA, 2014/2015 to 2015/2016

Figure 87 shows the age- and sex-adjusted percentage of Manitoba residents age 75 and older admitted for the first time to a personal care home.

On average, there were 2,585 of Manitoba residents age 75 and older admitted to a personal care home each year for the period of 2014/2015 to 2015/2016, representing 3.0% of all individuals in that age group. Prairie Mountain RHA had significantly higher percentage of personal care home admissions than Manitoba overall, while Northern Health Region had a significantly lower percentage.

Figure 88 shows the distributions of level of care assigned to PCH residents age 75 and older at the time of their admission. Level 1 represents the lowest level of need and Level 4 represents the highest. There were no Level 1 residents admitted during this time period. Levels 2Y and 3Y represent individuals who required close supervision due to possible behavioural issues, while 2N and 3N were for individuals who did not require supervision. Almost two-thirds (60%) of admissions were for individuals assessed at a Level 2 or 3 and not requiring supervision for Manitoba overall.

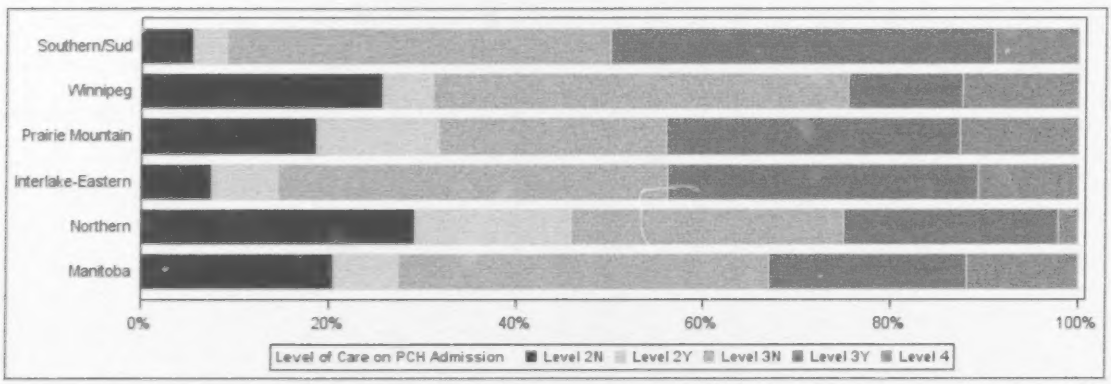


Figure 88: Percent distributions of level of care assigned to PCH residents age 75 and older at time of admission, 2014/2015 to 2015/2016

Median Wait Times for Personal Care Home Admission

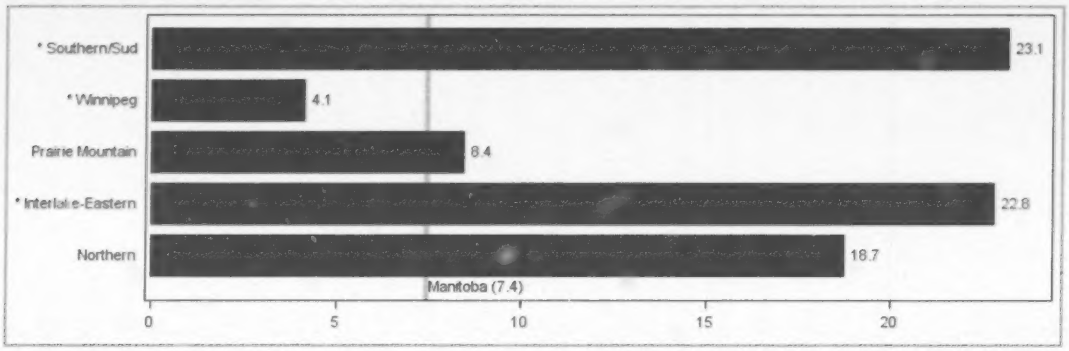


Figure 89: Median wait time (weeks) from assessment to admission of residents age 75 and older by RHA, 2014/2015 to 2015/2016

Figure 89 shows the amount of time it took for half of all Manitoba residents age 75 and older to be admitted after being assessed as requiring placement into a personal care home.

There were a total of 5,170 Manitoba residents age 75 and older admitted to a personal care home in the 2014/2015 to 2015/2016 time period. The median wait time in Manitoba was 7.4 weeks. Regionally, the wait time varied. Southern Health-Santé Sud and Interlake-Eastern RHA had significantly higher wait times, while Winnipeg Health Region had a significantly lower wait time when compared to Manitoba overall.

Of all Manitoba residents age 75 and older admitted to a personal care home in 2014/2015 to 2015/2016, 71.6% were waiting in a hospital prior to admission, while 28.4% were waiting in the community, i.e. a home setting, as shown in Figure 90.

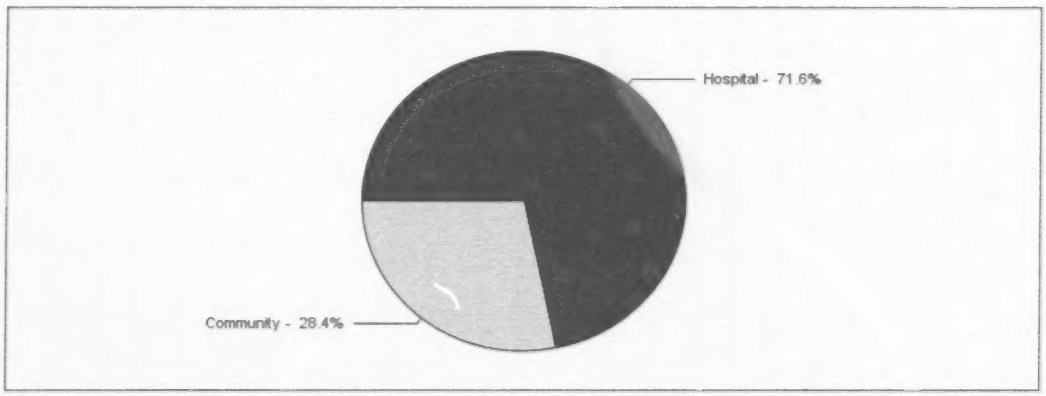


Figure 90: Percentage of location prior to admission of residents age 75 and older, 2014/2015 to 2015/2016

Median Length of Stay (Years) at Personal Care Homes

	Level of Care			
	All	**1-2**	**3**	**4**
Prairie Mountain	2.3	3.2	1.8	1.1
Northern	2.3	2.3	2.4	2.6
Interlake-Eastern	1.9	3.0	1.6	1.9
Southern Health - Santé Sud	2.0	3.6	1.9	2.0
Winnipeg	1.9	2.3	1.8	1.1
Manitoba	**2.0**	**2.6**	**1.8**	**1.3**

Table 5: Median length of time (years) spent in a personal care home for residents age 75 and older by RHA, 2014/2015 - 2015/2016

Table 5 shows the length of time for which half of all Manitoba residents age 75 and older stayed in a PCH following admission, by level of care at admission.

On average, there were 3,014 Manitoba residents age 75 and older discharged from a personal care home each year for the period of 2014/2015 to 2015/2016.

The overall median length of stay was 2 years. Regionally, the length of stay varied from a high of 2.3 years in Prairie Mountain Health and Northern RHA to 1.9 years in Interlake-Eastern and Winnipeg RHAs. Across levels of care, residents admitted as a level 4 (sicker patients) had a length of stay of 1.3 years compared to those admitted as a level 1 or 2 (healthier patients) who had a length of stay of 2.6 years.

Figure 91 shows the median personal care home length of stay over time. The median length of stay has been decreasing over the last few time periods from a high of 2.5 years in 2006-2008 to 2.1 years in 2014-2016.

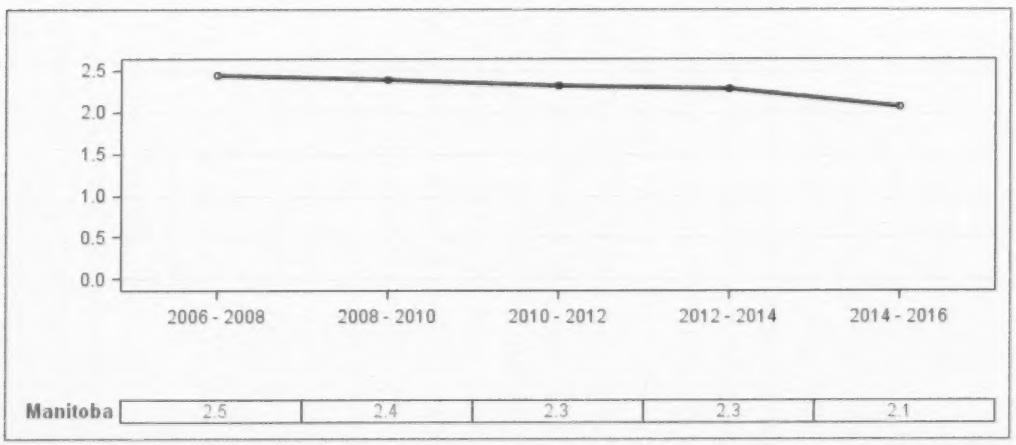


Figure 91: Median length of stay over time in personal care homes, 2006/2007–2007/2008 to 2014/2015–2015/2016

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Preventative Services

The following section provides an overview of preventative and screening services for selected programs available in Manitoba. Detailed information on immunizations have not been included in this report, as they are shown in Manitoba Health, Seniors and Active Living's annual Manitoba Immunization Monitoring System (MIMS) report at:

http://www.gov.mb.ca/health/publichealth/surveillance/reports.html#influenza

In Manitoba, breast screening mammograms are provided through the Manitoba Breast Screening Program to check women ages 50 to 74 for early signs of breast cancer.

For the period of 2014/2015 to 2015/2016, there were 104,558 Manitoba female residents ages 50 to 74 who had a mammogram, representing 56.5% of the female population in the same age group.

Papanicolaou (Pap) tests are provided to Manitoba females ages 21 to 69 for the early detection of cervical cancer. For the period of 2013/2014 to 2015/2016, there were 218,899 Manitoba females ages 21 to 69 who had a Pap test, representing 53.1% of the female population in the same age group.

Breast Cancer Screening

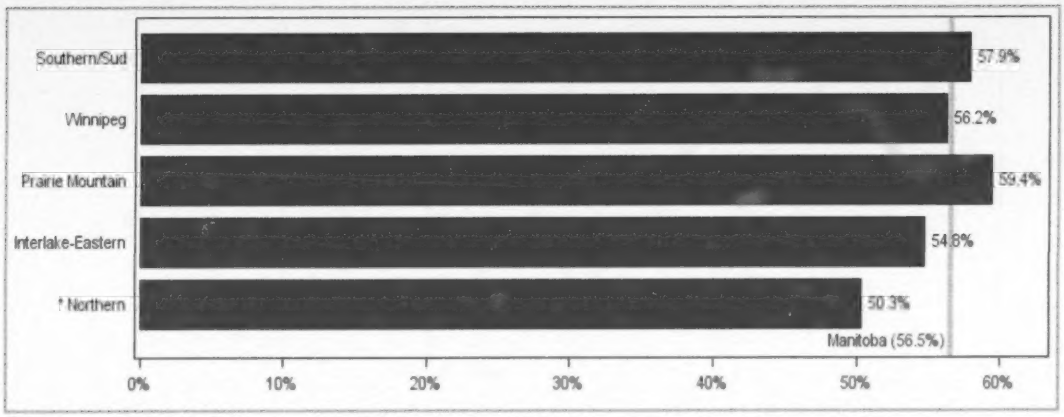

Figure 92: Age-adjusted percent of female residents ages 50 to 74 who received a mammogram by RHA, 2014/2015 to 2015/2016

Figure 92 shows the age-adjusted percent of Manitoba females ages 50 to 74 who received at least one mammogram in a two-year period, by RHA of residence.

"BreastCheck" is a provincially monitored screening program managed by CancerCare Manitoba. The program recommends that all women between 50 and 74 years of age get screened every 2 years for breast cancer.

For the period of 2014/2015 to 2015/2016, there were 104,558 Manitoba females ages 50 to 74 who had a mammogram, representing 56.5% of the female population for the same age group. The age-adjusted percentage in Northern Health Region was significantly lower than Manitoba overall.

Cervical Cancer Screening

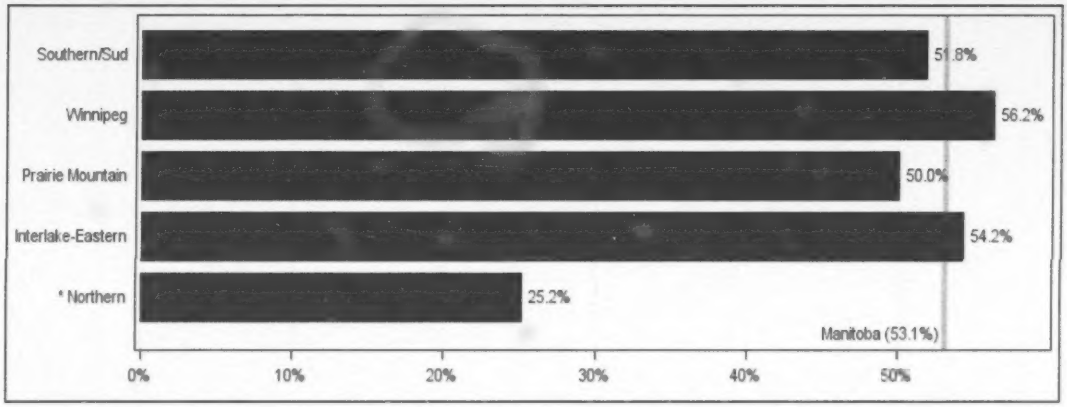

Figure 93: Age-adjusted percent of female residents ages 21 to 69 who received a Pap test by RHA, 2013/2014 to 2015/2016

Figure 93 shows the age-adjusted percent of Manitoba females ages 21 to 69 who received at least one Papanicolaou (Pap) test in a three-year period, by RHA of residence.

"CervixCheck" is a provincially monitored screening program managed by CancerCare Manitoba. The goal of this program is to reduce the number of women diagnosed with cervical cancer.

For the period of 2013/2014 to 2015/2016, there were 218,899 Manitoba females ages 21 to 69 who had a Pap test, representing 53.1% of the female population for the same age group. The age-adjusted percentage in Northern Health Region was significantly lower than Manitoba overall.

Influenza Immunizations

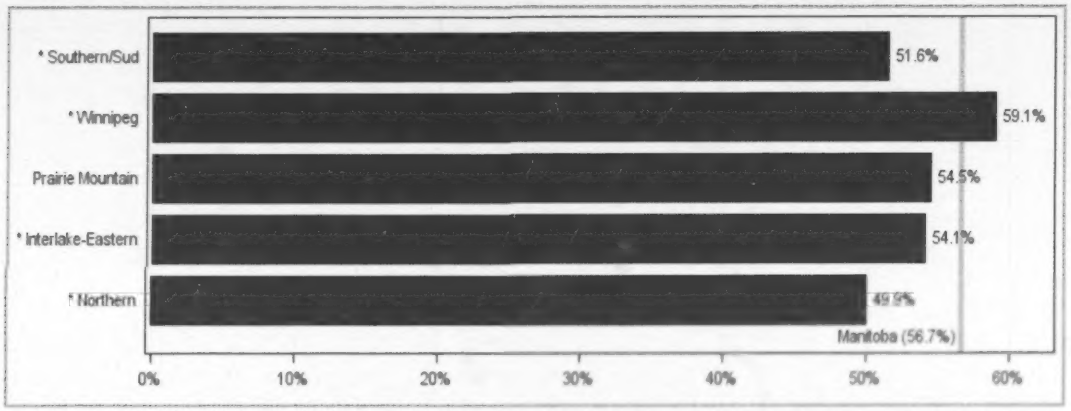

Figure 94: Age- and sex-adjusted percent of Manitoba residents age 65 and older immunized for influenza, 2014/2015

Figure 94 shows the age– and sex -adjusted percentage of Manitobans age 65 and older who were immunized for influenza (flu), by RHA of residence.

In the 2014/2015 'flu season' (September 1, 2014 to March 31, 2015), the percentage of Manitobans age 65 and older who received an immunization for influenza was 56.7%. The percentage in Winnipeg Health Region was significantly higher than Manitoba overall.

For more information on immunizations in Manitoba please follow the link below.

http://www.gov.mb.ca/health/publichealth/surveillance/reports.html#influenza

Pneumococcal Immunizations

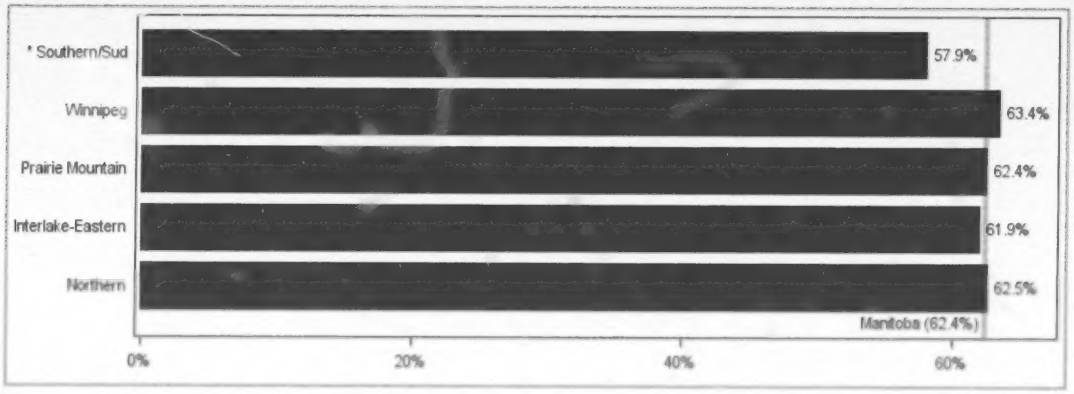

Figure 95: Age- and sex-adjusted percent of Manitoba residents age 65 and older immunized for pneumonia, 2014

Figure 95 shows the age– and sex-adjusted percentage of Manitobans age 65 and older who had a current pneumococcal vaccine, by RHA of residence.

In 2014, the percentage of Manitobans age 65 and older who had a current pneumococcal vaccine was 62.4%. The percentage in Southern Health-Santé Sud was significantly lower than Manitoba overall.

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Prescription Drug Use

The following section provides an overview of prescription drug use and paid expenditures by drug benefit plan in Manitoba.

In 2015/2016, 69.7% of Manitoba residents had at least one prescription dispensed. On average, these residents were prescribed about 3 different types of drugs in the fiscal year.

Manitoba paid $263.1 million in drug expenditures for eligible Manitobans through the Pharmacare program, $65.1 million through Family Services, $11.3 million through nursing home care and $3.6 million through palliative care.

Pharmaceutical Use

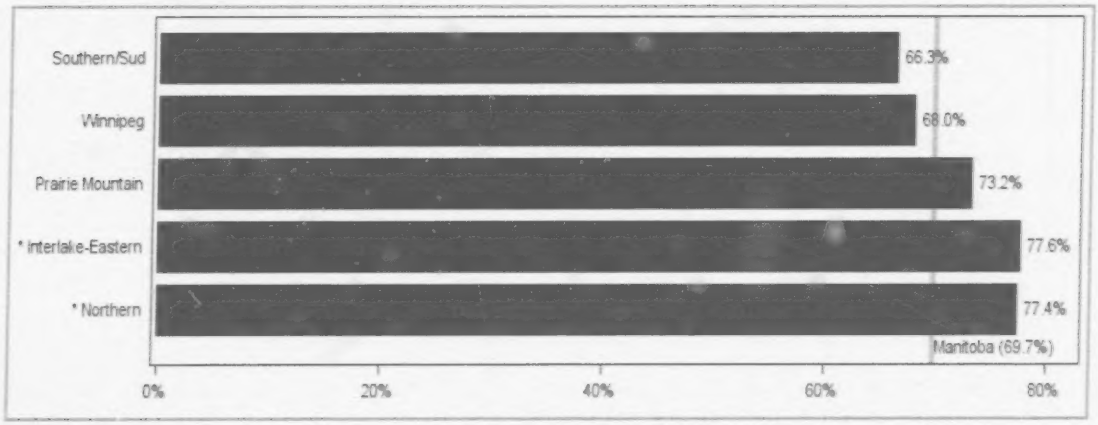


Figure 96: Age- and sex-adjusted percent of residents who had at least one prescription dispensed by RHA, 2015/2016

Figure 96 shows the age– and sex-adjusted percent of Manitoba residents who had at least one prescription dispensed in 2015/2016, by RHA of residence.

In 2015/2016, 69.7% of Manitoba residents had at least one prescription dispensed. The age-and sex-adjusted percentages for Interlake-Eastern RHA and Northern Health Region were significantly higher than Manitoba overall.

Drugs Dispensed per User

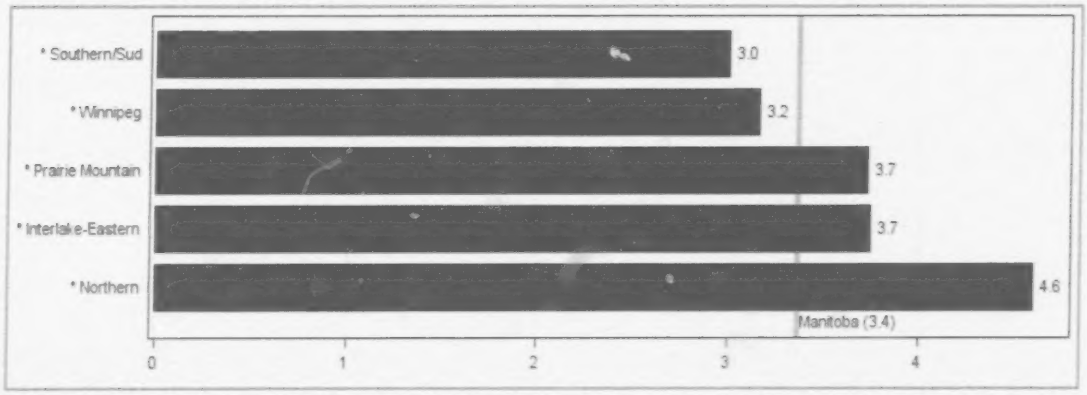
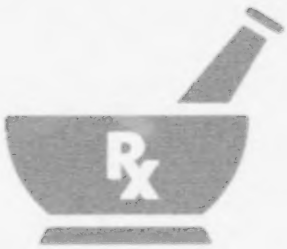


Figure 97: Age- and sex-adjusted average number of drug types dispensed per resident by RHA, 2015/2016

Figure 97 shows the age- and sex-adjusted average number of drug types dispensed per Manitoba resident, by RHA of residence.

In 2015/2016, an average of 3.4 drug types were dispensed per Manitoba resident. The age- and sex-adjusted number varied significantly across the province, ranging from 3.0 drug types per Southern Health-Santé Sud resident to 4.6 drug types per Northern Health Region resident.



Total Drug Expenditures by Plan and RHA

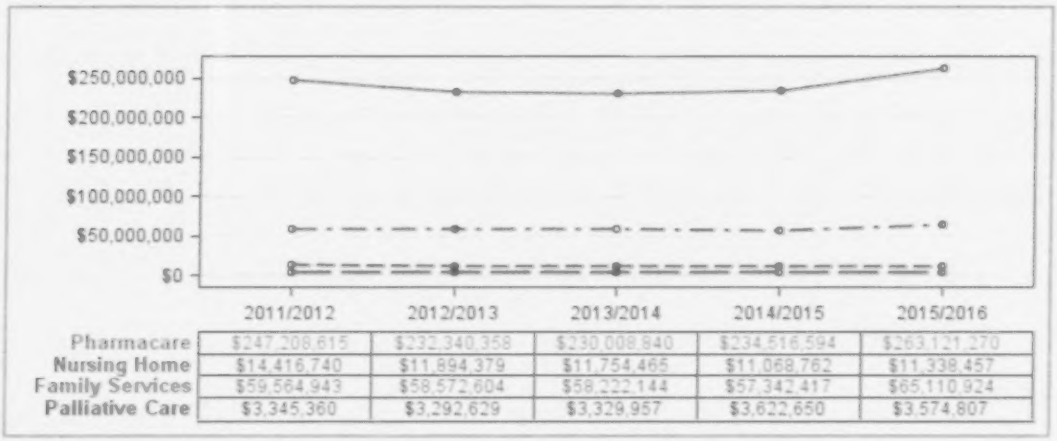
RHA	Pharmacare	Nursing Home	Family Services	Palliative Care
Southern/Sud	$32,703,410	$608,205	$5,256,608	$550,131
Winnipeg	$162,451,605	$6,814,186	$48,904,940	$1,716,284
Prairie Mountain	$36,932,203	$2,741,411	$7,059,727	$871,140
Interlake-Eastern	$26,489,464	$1,047,848	$3,106,967	$405,239
Northern	$4,544,588	$126,807	$782,682	$32,012
Manitoba	$263,121,270	$11,338,457	$65,110,924	$3,574,807

Table 6: Total paid drug expenditures by plan and RHA, 2015/2016

Table 6 shows the total paid expenditures by drug benefit plan and by RHA of residence.

In 2015/2016, Manitoba paid $263.1 million in drug expenditures for eligible Manitoba residents through the Pharmacare program, $65.1 million through Family Services, $11.3 million for those in Nursing Homes and $3.6 million for those in palliative care.

Figure 98 shows the total paid expenditures by drug benefit plan for Manitoba over time. The total expenditures by plan decreased from 2011/2012 to 2014/2015, but levelled off or increased for 3 or 4 plans in 2015/2016. Pharmacare represents the largest proportion (76.7%) of expenditures.



	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Pharmacare	$247,208,615	$232,340,358	$230,008,840	$234,516,594	$263,121,270
Nursing Home	$14,416,740	$11,894,379	$11,754,465	$11,068,762	$11,338,457
Family Services	$59,564,943	$58,572,604	$58,222,144	$57,342,417	$65,110,924
Palliative Care	$3,345,360	$3,292,629	$3,329,957	$3,622,650	$3,574,807

Figure 98: Total paid expenditures by fiscal year

Glossary

The Glossary provides explanations and definitions for the indicators and key terms used in this report. The method used to calculate each indicator is described in this section.

Acute Myocardial Infarction (Heart Attack) Rate

Calculated as the number of hospitalizations or deaths due to acute myocardial infarction (AMI) in residents age 40 or older per 1,000 residents age 40 or older. The denominator was residents age 40 or older as of June 1st. Rates were age- and sex-adjusted to the Manitoba population age 40 or older. AMI is defined by ICD-9-CM code 410 or ICD-10-CA code I21 in the most responsible diagnosis field for hospitalization or as the cause of death in Vital Statistics death files. Persons discharged alive from hospital after less than three days were excluded as likely 'rule-out' AMI cases.

Adjusted Rate

A statistical process that makes groups such as those in particular geographic areas comparable by removing the effects of demographic differences such as age and sex distribution. Essentially, adjusted rates tell us what the rates would be if each geographic area had the same age and sex distribution. Therefore, adjusted rates are fictional rates which use statistical models to remove the effects of age and sex differences and to allow for comparisons across populations.

Accordingly, while adjusted rates have been statistically modelled to be comparable to each other, they should be considered fictional in the sense that they do not measure anything directly. Please note that these adjusted rates cannot be compared to other rates which have not received the same adjustment.

Alternate Level of Care (ALC)

Inpatient hospital days are identified as ALC when a patient no longer requires the level of care their acute care setting provides, and where the patient is awaiting discharge to a more appropriate non-acute care setting, such as personal care home placement.

The average lengths of stay for acute care hospitalizations, and for hospitalizations where a portion of the stay included ALC were calculated.

Ambulatory Care Visit Rate

This is the average number of visits to physicians per resident . The denominator is all residents as of June 1st. The number was age- and sex-adjusted to the Manitoba population.

The term 'ambulatory visits' captures virtually all contacts with physicians, except during inpatient hospitalization and emergency room visits. Ambulatory visits include regular office visits, walk-in clinics, home visits, nursing home visits, visits to outpatient departments of hospitals, emergency room visits (where data are recorded) and visits for prenatal care. Visits to Nurse Practitioners are excluded.

Birth Rate

Calculated as the number of live births per 1,000 residents. The denominator was all residents as of June 1st. The Vital Statistics birth records were used to count live births.

Breast Cancer Screening Rate

The proportion of female residents ages 50 to 74 who had at least one mammogram in a two-year period. The denominator was all female residents ages 50 to 74 as of June 1st of the second year. The proportion was age- adjusted to the Manitoba female population ages 50 to 74. The indicator includes both screening and diagnostic mammograms, identified by the following tariffs in the physician claims:

- 7098 (Radiology, Intraluminal Dilatation, Mammography, Bilateral)
- 7099 (Radiology, Intraluminal Dilatation, Mammography, Unilateral)
- 7104 (Screening Mammography Bilateral)

Cataract Surgery Rate

The number of cataract replacement surgeries performed on residents age 50 or older, per 1,000 residents age 50 or older. The denominator was residents age 50 or older as of June 1st. The rate was age- and sex-adjusted to the Manitoba population age 50 or older. Cataract surgery was defined by a physician claim with tariff codes 5611, 5612 and tariff prefix 2 (surgery), or a hospital separation with ICD-9-CM procedure codes 13.11, 13.19, 13.2, 13.3, 13.41, 13.42, 13.43, 13.51, 13.59, or CCI code 1.CL.89. Additional cataract surgeries for Manitoba residents were added from medical reciprocal claims for out of province procedures, including Alberta (tariff code 27.72) and Saskatchewan (tariff codes 135S, 136S, 226S and 325S). The most recent medical reciprocal claims data available for cataract surgery rates were provided.

Caesarean Section Rate

The proportion of caesarean section procedures among female residents ages 15 to 54. The denominator was total in-hospital deliveries among female residents ages 15 to 54 at hospital admission. The rate was age-adjusted to the Manitoba female population ages 15 to 54 who delivered in the same year. Caesarean section procedures were defined by ICD-9-CM procedure codes 74.0, 74.1, 74.2, 74.9 or CCI code 5.MD.60 in any procedure field in hospital abstracts.

Cervical Cancer Screening Rate

The proportion of female residents ages 21 to 69 who received at least one Papanicolaou (Pap) test in a three-year period. The denominator was all female residents ages 21 to 69 on June 1st of the middle year. The proportion was age-adjusted to the Manitoba female population ages 21 to 69. The indicator is defined by a physician visit with a tariff code for a Pap test, including a visit for a physical or regional exam with a Pap test, or a visit for Pap testing only. The tariffs used were as follows:

- 8470 – Regional gynaecological exam, including cytological smear of the cervix, provided by a GP/FP
- 8495 – complete physical and gynaecological exam, including cytological smear of the cervix, provided by an OB/GYN specialist

- 8496 – regional gynaecological exam, including cytological smear of the cervix, provided by an OB/GYN specialist
- 8498 – complete physical and gynaecological exam, including cytological smear of the cervix, provided by a GP/FP
- 9795 – cytological smear of the cervix for cancer screening

Child Mortality Rate

Calculated as the number of deaths among children ages 1 to 19 years in a five-year period, per 100,000 children ages 1 to 19 years in the same time period. The rates were age- and sex-adjusted to the overall Manitoba population ages 1 to 19 years old. The Vital Statistics death records were used to count deaths. Rates fluctuate in areas with small populations; therefore five years of data was used instead of a single year.

Chronic Conditions Prevalence Rate

The proportion of residents age 40 or older having one or more of the following conditions: diabetes, hypertension, ischemic heart disease, heart failure, stroke or chronic obstructive pulmonary disease (COPD). The denominator was residents age 40 or older as of June 1st. The proportion was age- and sex-adjusted to the Manitoba population age 40 or older.

The chronic conditions were defined as follows:

- Diabetes:
    - at least one hospitalization or two physician visits over a two-year period with a diagnosis defined by ICD-9-CM codes 250 or ICD-10-CA codes E10-E14
- Hypertension:
    - at least one hospitalization or two physician visits over a two-year period with a diagnosis defined by ICD-9-CM code 401-405 or ICD-10-CA codes I10-I13, I15
- Ischemic heart disease:
    - at least one hospitalization or two physician visits over a one-year period with a diagnosis defined by ICD-9-CM codes 410-414 or ICD-10-CA codes I20-I25
- Heart failure:
    - at least one hospitalization or two physician visits over a one-year period with a diagnosis defined by ICD-9-CM code 428 or ICD-10-CA code I50

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- Stroke:
    - at least one hospitalization or two physician visits over a one-year period with a diagnosis defined by ICD-9-CM codes 430, 431, 434, 435, 436 or ICD-10-CA codes G45, H34.0, H34.1, I60, I61, I63, I64
- COPD:
    - at least one hospitalization or one physician visit over a one-year period with a diagnosis defined by ICD-9-CM code 491, 492, 496 or ICD-10-CA codes J41-J44

Chronic Obstructive Pulmonary Disease (COPD) Prevalence Rate

The proportion of residents age 35 and older with chronic obstructive pulmonary disease (COPD). The denominator was residents age 35 or older as of June 1st. The proportion was age- and sex-adjusted to the Manitoba population age 35 or older. COPD is defined as at least one hospitalization or one physician visit over a one-year period with a diagnosis defined by ICD9-CM 491, 492, 496 or ICD-10-CA codes J41-J44.

Coronary Artery Bypass Graft Surgery Rate

The number of bypass surgeries performed on residents age 40 or older, in a five-year period, per 1,000 residents age 40 or older. The denominator was residents age 40 or older during the same time period. The rate was age- and sex-adjusted to the Manitoba population age 40 or older. Bypass surgery was defined by ICD-9-CM procedure codes 36.10-36.17, 36.19 or CCI code 1.IJ.76 in any procedure field in hospital abstracts.

Cumulative Mental Illness Prevalence Rate

The proportion of residents age 10 or older who received treatment for any of the following in a five-year period: depression, anxiety, substance abuse, personality disorders, or schizophrenia. The proportion was age- and sex-adjusted to the Manitoba population age 10 or older. See corresponding glossary entries for definitions on specific mental illnesses.

Day Surgery

The total number of day surgery separations per 1,000 residents. The denominator was all residents as of June 1st. The rate was age- and sex-adjusted to the Manitoba population.

Day Surgery hospitalizations involve surgical services on an outpatient basis and are typically less than one day. All Manitoba hospitals were included; personal care homes, nursing stations and long-term care facilities were excluded (Deer Lodge Centre, Manitoba Adolescent Treatment Centre, Rehabilitation Centre for Children and Riverview Health Centre).

Death Causes

The distribution of causes of death based on Vital Statistics files, using the 21 chapters of the International Classification of Diseases (ICD-10-CA) system. Results are provided at the Manitoba level, but not by RHA due to the relatively small number of deaths by cause in smaller areas.

Death Rate

Calculated as the number of deaths per 1,000 residents. The denominator was all residents as of June 1st. The rates were age- and sex- adjusted to the overall Manitoba population. The Vital Statistics death records were used to count deaths.

Diabetes Prevalence Rate

The proportion of residents age 1 or older with at least one hospitalization or at least two physician visits with a diagnosis of diabetes within a two-year period. A diabetes diagnosis was defined as ICD-9-CM codes 250 or ICD-10-CA codes E10-E14. The denominator was residents age 1 or older as of June 1st of the second year. The proportion was age- and sex- adjusted to the Manitoba population age 1 or older.

Although the case definition uses a two-year period to define cases, an annual number was derived by using the earliest date of hospitalization or the later of the two physician claims as the case date. The definition for diabetes was derived from the Canadian Chronic Disease Surveillance System (CCDSS). This definition has been validated and is the definition utilized by Manitoba Health, Seniors and Active Living.

Because prevalence has a multi-year and multiple-health-system-encounter definition threshold, these values may increase from submission year to submission year over the most recent disease definition period. This means that new versions of the CCDSS may increase counts for previous CCDSS versions as new health information is captured, as illustrated by the following example:

- An individual has only one physician visit for diabetes in 2013/2014 and none in 2012/2013, and thus does not meet the threshold for diabetes prevalence or incidence during the 2012/2013-2013/2014 period.
- The same individual has another physician visit for diabetes in 2014/2015, thus meeting the threshold for the 2013/2014-2014/2015 period. However, since the incidence is assigned to the year of the first physician visit (2013/2014), this increases the 2012/2013-2013-2014 incidence prevalence counts by one case.

Drug Program Expenditures by Plan and RHA

The total paid expenditures by drug benefit plan and RHA of residence is shown. Drug program expenditures are grouped in to the following categories: Pharmacare, Nursing Home, Family Services and Palliative Care. Expenditure data is taken from DPIN.

Pharmacare is a drug benefit program for eligible Manitoba residents, regardless of disease or age, whose income is seriously affected by high prescription drug costs. Pharmacare coverage is based on both an individual's total family income and the amount they pay for eligible prescription drugs. Each year the individual is required to pay a portion of the cost of the eligible prescription drugs. This amount is the annual Pharmacare deductible. The deductible is set based on the adjusted family income.

Drugs Dispensed per User

The average number of different types of drugs dispensed to each resident who had at least one prescription. The number was age- and sex-adjusted to the Manitoba population. A 'different' drug type was determined by fourth-level class of the Anatomic, Therapeutic, Chemical (ATC) classification system. This level essentially separates drugs used for different health problems. A person could have several prescriptions for drugs in the same 4th level ATC class, but this would only count as one drug type in the year.

Drugs Programs Information Network (DPIN)

An electronic, on-line, point-of-sale prescription drug database. It links all community pharmacies (but not pharmacies in hospitals or personal care homes) and captures information about all Manitoba residents, including most prescriptions dispensed to registered First Nations. DPIN contains information-such as unique patient identification, age, date of birth, sex, medication history, over-the-counter medication history, patient postal code, new drug prescribed, date dispensed, and unique pharmacy identification number. DPIN is maintained by Manitoba Health, Seniors and Active Living.

First Nations Residents

Residents who have registered with Manitoba Health, Seniors and Active Living as a 'Status or Treaty Indian.' Entitlements of land, voting rights, and Band membership are received by registered First Nations. A registered First Nation resident may be living in a First Nation community (on-reserve) or in a non-First Nation community (off-reserve).

Hip Replacement Rate

The number of total hip replacements performed on residents age 40 or older, per 1,000 residents age 40 or older. The denominator was all residents age 40 or older as of June 1st. The rate was age- and sex -adjusted to the Manitoba population age 40 or older. Hip replacements were defined by ICD-9-CM codes 81.50, 81.51, or 81.53 or CCI code 1.VA.53.LA-PN or 1.VA.53.PN-PN in any procedure field in hospital abstracts. This definition includes revisions on previously performed hip replacements and excludes partial hip replacements.

Home Care

The Manitoba Home Care Program, established in its present form in 1974, is the oldest comprehensive, province-wide, universal home care program in Canada. Home Care is provided to Manitoba residents of all ages based on assessed need and taking into account other resources available to the indi-

vidual including family, community resources and other programs. Home Care services are provided free of charge. Reassessments at pre-determined intervals are the basis for decisions by case managers to discharge individuals from the Program or to change the type or amount of services delivered by the Home Care Program.

Home Care: Number of Assessments for Admission, Admissions and Discharges

The annual number of assessments, admission and discharges to Manitoba residents is shown. Assessments are made by case managers and may or may not lead to an admission in to the Home Care Program.

Home Care: Total Number of Clients on Home Care Program at Fiscal Year End

The average monthly number of Manitoba residents receiving coordinated Home Care services by RHA of residence is shown.

Hospital Discharge Abstract Database

Hospital abstracts are completed at the point of discharge for all separations from acute care facilities. Abstracts are completed for all inpatient stays as well as some day surgery stays. Since April 1, 2004, they include up to 25 diagnosis codes based on the International Classification of Diseases, 10th Revision, Canada (ICD-10-CA) and 20 procedure (intervention) codes based on the Canadian Classification of Health Interventions (CCI). Information on Manitoba residents who are admitted to out of province acute care facilities is captured through reciprocal Hospital Claims data, housed at Manitoba Health, Seniors and Active Living.

Hospital Separation Rate

The total number of inpatient hospital separations of residents, per 1,000 residents. The denominator was all residents as of June 1st. The rate was age- and sex-adjusted to the Manitoba population.

A separation from a health care facility occurs anytime when a patient leaves because of discharge, transfer or death. In a fiscal year, a resident could be hospitalized more than once, so this indicator shows the total number of separations from acute care facilities. All Manitoba hospitals were included; personal care homes, nursing stations and long-term care facilities were excluded (Deer Lodge Centre, Manitoba Adolescent Treatment Centre, Rehabilitation Centre for Children and Riverview Health Centre). Out-of-province hospitalizations for Manitoba residents were also included. In cases of birth, newborn hospitalizations were excluded.

Hospital Use Rate

The proportion of residents who were admitted to an acute care hospital at least once. The denominator was all residents as of June 1st. The proportion was age- and sex-adjusted to the Manitoba population.

All Manitoba hospitals were included; personal care homes, nursing stations and long-term care facilities were excluded (Deer Lodge Centre, Manitoba Adolescent Treatment Centre, Rehabilitation Centre for Children and Riverview Health Centre). Out-of-province hospitalizations for Manitoba residents

were also included. In cases of birth, newborn hospitalizations were excluded. Outpatient and day surgery services were excluded.

Hospitalization Rate for Ambulatory Care Sensitive Conditions (ACSC)

The rate at which residents ages 0 to 74 were hospitalized for ambulatory care sensitive conditions, per 1,000 residents ages 0 to 74. The denominator was all residents ages 0 to 74 as of June 1st. The rate was age- and sex-adjusted to the Manitoba population ages 0 to 74. All Manitoba hospitals were included; PCHs, nursing stations and Long-Term Care facilities were excluded (Deer Lodge and Riverview). Individuals who died in hospital were excluded from the numerator.

ACSC are a set of conditions comprised of 25 diseases/diagnoses, which have been identified as observably responsive to primary care. ACSC hospitalizations accordingly can function as an indirect measure of primary care access. Although significantly higher rates are presumed to reflect problems obtaining access to primary care, not all admissions for these conditions are avoidable.

ACSC include (with ICD-10-CA and CCI codes):

- Congenital syphilis: Z38 & A50
- Immunization-related & preventable conditions (primary diagnoses): A35, A37, A80, I00, I01
- Hemophilus meningitis for age 1-5 only: G00.0
- Epilepsy: G40, G41
- Convulsions: R56
- Severe ENT infections: procedure code 1.DF.53.JATS and diagnosis code H66, J02, J03, J06, J312
- Pulmonary tuberculosis: A15.0, A15.1, A15.2, A15.3, A15.7, A15.9, A16.0, A16.1, A62, A16.7, A16.9
- Other tuberculosis: A15.4, A15.5, A15.6, A15.8, A16.3, A16.4, A16.5, A16.8, A17, A18, A19
- COPD: J41, J42, J43, J44, J47. There is a new combination code of acute lower respiratory infection for patients with COPD (J44) and J10.0, J11.0, J12, J13, J14, J15, J16, J18, J21, J22
- Acute bronchitis: secondary diagnosis of J41, J42, J43, J44, J47 where J20 is the primary diagnosis

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- Bacterial pneumonia: primary diagnosis of J13, J14, J15.3, J15.4, J15.7, J15.9, J16, J18. Exclude cases with secondary diagnosis of sickle cell anemia: D57.0, D57.1, D57.2, and D57.8. Exclude patients < 2 months old

- Asthma: primary diagnosis of J45

- Congestive heart failure:

    i. exclude cases with certain cardiac interventions (all categories):1.HB.53, 1.HB.54, 1.HB.55, 1.HD.53, 1.HD.54, 1.HD.55, 1.HZ.53, 1.HZ.55, 1.HZ.85, 1.IJ.50, 1.IJ.57.GQ, 1.IJ.76

    ii. where the primary diagnosis is: I50, J81

- Hypertension: primary diagnosis of I10.0, I10.1, I11 and exclude cardiac surgery as stated above.

- Angina: exclude cases with any surgical intervention in CCI section 1, 2 or 5. And include primary diagnosis of I20, I23.82, I24.0, I24.8, I24.9

- Cellulitis: incision of skin and subcutaneous tissue intervention. Exclude cases with any surgical intervention except incision of skin and subcutaneous tissue where it is the only listed intervention. Include primary diagnosis of :L03, L04, L08, L44.4, L88, L92.2, L98.0, L98.3

- Diabetes: primary diagnosis of: E10.1, E10.6, E10.7, E10.9, E11.0, E11.1, E11.6, E11.7, E11.9, E13.0, E13.1, E13.6, E13.7, E13.9, E14.0, E14.1, E14.6, E14.7, E14.9

- Hypoglycemia: primary diagnosis of E16.0, E16.1, E16.2

- Gastroenteritis: K52.2, K52.8, K52.9

- Kidney/urinary infection: N10, N11, N12, N13.6, N15.8, N15.9, N16.0-N16.5, N28.83-N28.85, N36.9, N39.0, N39.9

- Dehydration/volume depletion: primary diagnosis of E86

- Iron deficiency anemia: age <= 5 and primary diagnosis of: D50.1, D50.8, D50.9

- Nutritional deficiencies: primary diagnosis of E40, E41, E42, E43, E55.0, E64.3

- Failure to thrive: age < 1 and primary diagnosis of R62

- Pelvic inflammatory disease:

i. exclude cases with surgical procedure of hysterectomy: 1.RM.87, 1.RM.89, 1.RM.91, 5.CA.89.CK, 5.CA.89.DA, 5.CA.89.GB, 5.CA.89.WJ, 5.CA.89.WK

ii. primary diagnosis of: N70, N73, N99.4 for females only

- Dental conditions: K02-K06, K08, K09.8, K09.9, K12, K13

Hospitalizations by Service Type

The proportion of total inpatient hospitalizations by service type in a fiscal year. A multi-step process was used to group inpatient hospitalizations into Service Type categories. Most Responsible Diagnoses, Patient Service Codes, Case Mix Group (CMG) system, and Major Clinical Categories (MCC) were used to define Service Types as follows:

- ALC: if the patient was identified as Alternate Level of Care (ALC) with an ALC Reason Code at any point during the hospitalization
- Live Birth: all newborns, i.e. an ICD-10-CA diagnosis code of Z38 and admission category of "Newborn"
- Medical: if the CMG was diagnostic
- Surgical: if the CMG was interventional
- Mental Disorders: if the MCC was Mental Diseases and Disorders, i.e. MCC of 17
- Pregnancy and Birth: if the MCC was Pregnancy and Childbirth, i.e. MCC of 13 and hospitalizations containing ICD-10-CA codes Z32-Z35 (if not grouped elsewhere)

Hypertension (High Blood Pressure) Prevalence Rate

The proportion of residents age 20 or older with at least one hospitalization or at least two physician visits with a diagnosis of hypertension within a two-year period. A hypertension diagnosis was defined as ICD-9-CM codes 401-405 or ICD-10-CA codes I10-I13, I15. The denominator was residents age 20 or older as of June 1st of the second year. The proportion was age- and sex-adjusted to the Manitoba population age 20 or older.

Although the case definition uses a two-year period to define cases, an annual number is derived by using the earliest date of hospitalization or the later of the two physician claims as the case date. The definition for hypertension was derived from the Canadian Chronic Disease Surveillance System (CCDSS). This definition has been validated and is the definition utilized by Manitoba Health, Seniors and Active Living.

Because prevalence has a multi-year and multiple-health-system-encounter definition threshold, these values may increase from submission year to submission year over the most recent disease definition

period. This means that new versions of the CCDSS may increase counts for previous CCDSS versions as new health information is captured, as illustrated by the following example:

- An individual has only one physician visit for diabetes in 2013/2014 and none in 2012/2013, and thus does not meet the threshold for diabetes prevalence or incidence during the 2012/2013-2013/2014 period.

- The same individual has another physician visit for diabetes in 2014/2015, thus meeting the threshold for the 2013/2014-2014/2015 period. However, since the incidence is assigned to the year of the first physician visit (2013/2014), this increases the 2012/2013-2013-2014 incidence prevalence counts by one case.

Hysterectomy Rate

The number of hysterectomy surgeries performed on female residents ages 20 to 84, per 1,000 female residents ages 20 to 84. The denominator was female residents ages 20 to 84 as of June 1st. The rate was age-adjusted to the Manitoba female population ages 20 to 84. Hysterectomy surgery was defined by ICD-9-CM procedure codes 68.3 – 68.9 or CCI codes 1.RM.87BAGX, 1.RM.87.CAGX, 1.RM.87.DAGX, 1.RM.87.LAGX, 1.RM.89, 1.RM.91 in any procedure field in hospital abstracts.

Immunization for Influenza (Flu) Rate

The proportion of residents age 65 or older who received a vaccine for the influenza season (September through March). The denominator was all residents age 65 or older as of the day they received the first vaccine dose during the season. Flu shots were defined by physician tariff codes 8791, 8792, 8793, or 8799 in Manitoba Immunization Monitoring System (MIMS) and Panorama data.

Immunization for Pneumonia Rate

The proportion of residents age 65 or older who ever received a vaccine for pneumonia. The denominator was all residents age 65 or older as of September 1st. For most seniors, a pneumococcal vaccination is considered a 'once in a lifetime' event, so these rates show the cumulative percent of residents who ever had a pneumococcal vaccination, as defined by physician tariff codes 8681-8694 and 8961 in MIMS and Panorama data.

Infant Mortality Rate

Calculated as the number of deaths among infants under one year of age, in a five-year period, per 1,000 live births in the same time period. The Vital Statistics death records were used to count deaths. Rates fluctuate in areas with small populations; therefore five years of data was used instead of a single year.

Injury Hospitalization Rate

The number of hospital separations of residents for which any injury code was included as one of the diagnoses in hospital abstracts per 1,000 residents. The denominator was all residents as of June 1st. Rates were age- and sex-adjusted to the Manitoba population.

Hospitalizations were defined as any inpatient stay with an external cause of injury diagnosis code, ICD-9-CM codes E800-E999; ICD-10-CA codes V01-Y89. Excluded from the hospitalizations due to injury are those related to medical error or complications, as follows:

- misadventures during surgical or medical care, ICD-9-CM codes E870-E876; ICD-10-CA codes Y60-Y69, Y88.1
- reactions or complications due to medical care, ICD-9-CM codes E878-E879; ICD-10-CA codes Y70-Y84, Y88.2, Y88.3
- adverse effects due to drugs, ICD-9-CM codes E930-E949; ICD-10-CA codes Y40-Y59, Y88.0

All Manitoba hospitals were included; PCHs, nursing stations and Long-Term Care facilities were excluded (Riverview, Deer Lodge, Rehabilitation Centre for Children and Adolescent Treatment Centre). Newborn birth injuries or deaths, stillbirths and brain deaths were excluded.

Injury Mortality Causes

The distribution of causes of injury death based on Vital Statistics files, using the International Classification of Diseases (ICD-10-CA) system. Excluded are codes for misadventures, reactions, complications, or adverse effects of medical, surgical or pharmaceutical treatments (see list in Injury Mortality Rate). Results are provided at the Manitoba level, but not by RHA due to the relatively small number of deaths by cause in smaller areas.

Injury Mortality Rate

Calculated as the number of deaths due to injury per 1,000 residents, based on Vital Statistics death codes. The denominator was all residents as of June 1st. Rates were age- and sex-adjusted to the Manitoba population. Injury deaths were defined as records with ICD-10-CA cause of death codes of V01-Y89.

Excluded from the hospitalizations due to injury are those related to medical error or complications, as follows:

- misadventures during surgical or medical care, ICD-9-CM codes E870-E876; ICD-10-CA codes Y60-Y69, Y88.1
- reactions or complications due to medical care, ICD-9-CM codes E878-E879; ICD-10-CA codes Y70-Y84, Y88.2, Y88.3
- adverse effects due to drugs, ICD-9-CM codes E930-E949; ICD-10-CA codes Y40-Y59, Y88.0

Insured Services per Capita

The total dollars spent on insured services in Manitoba per capita. The denominator was the number of residents as of June 1st.

The Health Services Insurance Plan operates outside the Provincial Consolidated Fund and provides for payment of insured services for hospitals, personal care homes, and health care providers on behalf of

Manitoba residents. Other plans include the prescription drugs program (Pharmacare), Ambulance, Air Ambulance, and Northern Patients Transportation programs.

Knee Replacement Rate

The number of total knee replacements performed on residents age 40 or older, per 1,000 residents age 40 or older. The denominator was all residents age 40 or older as of June 1st. The rate was age- and sex-adjusted to the Manitoba population age 40 or older. Knee replacements were defined by ICD-9-CM codes 81.54, 81.55, or CCI codes 1.VG.53.LA.PN and 1.VG.53.LA.PP in any procedure field in hospital abstracts. This definition includes revisions on previously performed knee replacements.

Lower Limb Amputations among Residents with Diabetes

The proportion of residents age 19 or older with diabetes who had a lower limb amputation (below or including the knee) in a five-year period. The denominator was residents age 19 or older with diabetes in the year prior to study period. See Diabetes Prevalence rate definition. The proportion was age– and sex-adjusted to the Manitoba population age 19 or older with diabetes. Amputation was defined by ICD-9-CM procedure codes 84.1-84.17 or CCI codes 1.VC.93, 1.VG.93, 1.VQ.93, 1.WA.93, 1.WE.93, 1.WJ.93, 1.WL..93, 1.WM.93 in any procedure field in hospital abstracts.

Cases of amputations due to accidental injury were excluded. These were defined by ICD-9-CM diagnosis codes 895-897 or ICD-10-CA codes S78, S88, S98, T05.3, T05.4, T05.5, T13.6.

Majority of Care

The proportion of residents receiving more than 50% of their ambulatory visits over a two-year period from the same physician. The denominator includes all residents with at least three ambulatory visits in the same two-year time period. The proportion was age- and sex-adjusted to the Manitoba population.

For children ages 0 to 14, visits included those to a General Practitioner/Family Practitioner (GP/FP) or Pediatrician; for those ages 15 to 59, only GP/FPs were used; for those age 60+, it could be a GP/FP or an Internal Medicine specialist.

Mood and Anxiety Disorders

The proportion of residents age 10 or older diagnosed with depression and/or anxiety disorder in a five-year period by any of the following:

- one or more hospitalizations with a diagnosis for depressive disorder, affective psychoses, neurotic depression or adjustment reaction: ICD–9–CM codes 296.2–296.8, 300.4, 309 or 311; ICD–10–CA codes F31, F32, F33, F341, F38.0, F38.1, F41.2, F43.1, F43.2, F43.8, F53.0, F93.0 or with a diagnosis for a manic disorder, anxiety state, phobic disorders, obsessive–compulsive disorders or hypochondriasis: ICD–9–CM codes 296.1, 300.0, 300.2, 300.3, 300.7; ICD–10–CA codes F40, F41.0, F41.1, F41.3, F41.8, F41.9, F42, F45.2

- one or more hospitalizations with a diagnosis for anxiety disorders: ICD–9–CM code 300; ICD –10–CA codes F32, F341, F40, F41, F42, F44, F45.0, F45.1, F45.2, F48, F68.0, or F99 AND one

or more prescriptions for an antidepressant, anxiolytic or mood stabilizer: ATC codes N05AN01, N05BA, N06A

- one or more physician visits with a diagnosis for depressive disorder or affective psychoses: ICD–9–CM codes 296, 311
- one or more physician visits with a diagnosis for anxiety disorders: ICD–9–CM code 300 AND one or more prescriptions for an antidepressant, anxiolytic or mood stabilizer: ATC codes N05AN01, N05BA, N06A
- three or more physician visits with a diagnosis for anxiety disorders or adjustment reaction: ICD–9–CM code 300, 309

The proportion was age and sex-adjusted to the Manitoba population age 10 or older.

Paediatric Dental Extraction Rate

The number of dental extractions among resident children under the age of six, per 1,000 children under the age of six. The denominator was resident children under the age of six as of June 1st. The rate was sex-adjusted to the Manitoba population under the age of six. Dental extractions were defined by ICD-9-CM codes 23.01, 23.09, 23.11, 23.19 or CCI codes 1.FE.57, 1.FE.89. Paediatric dental extractions performed outside of hospitals (e.g., in dentists' offices) were not included, so the rates reported may underestimate the extent of severe early childhood tooth decay.

Paediatric Dental Surgery Rate

The number of dental surgeries among children under the age of six, per 1,000 children under the age of six. The denominator was resident children under the age of six as of June 1st. The rate was sex-adjusted to the Manitoba population under the age of six. Dental surgeries were defined by ICD9-CM procedure code 23 or CCI code 1.FE. Paediatric dental surgeries performed outside of hospital (e.g. In dentists' office) were not included, so the rates reported may underestimate the extent of early childhood dental issues.

Percutaneous Coronary Intervention Surgery Rate

The number of percutaneous coronary intervention (PCI) surgeries performed on residents age 40 or older, per 1,000 residents age 40 or older in a five-year period. The denominator was residents age 40 or older during the same time period. The rate was age– and sex-adjusted to the Manitoba population age 40 or older. PCI was defined by ICD-9-CM procedure codes 36.01-36.03, 36.05, 36.06-36.07 or CCI code 1.IJ.50 and 1.IJ.57 in an procedure field in hospital abstracts.

Personal Care Homes (PCH)

Personal care homes (PCHs), or nursing homes, are residential facilities for persons with chronic illness or disability who can no longer remain safely at home even with home care services. Residents of PCHs are predominantly older adults. In Manitoba, PCHs can be proprietary (for profit) or non-proprietary. PCH data is populated by assessment, admission and discharge forms. An assessment form for placement in to a PCH is filled out by the resident while in an acute care facility or at home. The assessment

application is reviewed to decide if the person is eligible for admission. There may be a waiting period between admission approval and actual admission.

Personal Care Home, Admissions

The percentage of residents age 75 and older admitted to a PCH in a year (values shown are the annual average). Residence was assigned based on the location of the PCH. The denominator was all residents age 75 and older in the same period. The proportion was age- and-sex adjusted to the Manitoba population age 75 and older.

Personal Care Home, Level of Care on Admission

The distribution of level of care assigned to PCH residents 75 years of age and older at the time of their admission to a provincial PCH in a two-year period. Level 1 represents the lowest level of need, and Level 4 represents the highest.

For the report years there were zero residents admitted at level of care 1. Levels 2 and 3 were stratified by the close supervision indicator (coded as yes/no on assessment to indicate the need for close supervision due to possible behavioural issues), but due to small numbers level 4 was not stratified.

Personal Care Home, Median Length of Stay at Personal Care Homes

The median length of stay (in years) of PCH residents age 75 and older, over a two-year period, according to their level of care on admission. The median length of stay is the amount of time which half of all residents stayed.

Personal Care Home, Median Wait Time for Admission

The amount of time it took for half of all residents, age 75 and older, to be admitted, after being assessed as requiring PCH placement. The median wait time is provided in weeks and is shown for a two-year time period.

Personality Disorders Prevalence Rate

The proportion of residents age 10 or older diagnosed with personality disorders in a five-year period, by any of the following:

- one or more hospitalizations with a diagnosis for personality disorders, ICD-9-CM code 301; ICD-10-CA codes F34.0, F60, F61, F62, F68.1, F68.8, F69
- one or more physician visits with a diagnosis for personality disorders, ICD-9-CM code 301.

The proportion was age- and sex-adjusted to the Manitoba population age 10 or older.

Pharmaceutical Use Rate

The proportion of residents who had at least one prescription dispensed. The denominator was all residents as of June 1st. The proportion was age- and-sex adjusted to the Manitoba population. This in-

cludes all prescriptions dispensed from community-based pharmacies across Manitoba. Prescription data is captured in Manitoba's Drug Programs Information Network (DPIN) (see glossary entry above).

Physician Claims

These are claims for payment submitted to the provincial government by physicians for services they provide. Fee-for-service physicians receive payment based on these claims, while those submitted by salaried physicians are only for administrative purposes (referred to as "shadow billing").

Physician Use Rate

The proportion of residents who received at least one ambulatory visit. The denominator was all residents as of June 1st. The proportion was age- and sex-adjusted to the Manitoba population.

The term 'ambulatory visits' captures virtually all contacts with physicians, except during inpatient hospitalization. Ambulatory visits include regular office visits, walk-in clinics, home visits, nursing home visits, visits to outpatient departments of hospitals, emergency room visits (where data are recorded) and prenatal visits.

Population

Population data shown in this report was based on records of residents registered with Manitoba Health, Seniors and Active Living on June 1st. Registered individuals include persons who reside in the province of Manitoba, as well as new Manitobans arriving from another province (eligible for coverage after a waiting period of up to 3 months), new Manitobans from another country (eligible for coverage immediately if they have landed immigrant status), and foreign citizens holding a one-year or more work permit. Manitoba residents not covered include armed forces and federal penitentiary inmates.

Population Pyramid

A graph showing the age and sex distribution of a population. The percentage of residents within each five-year age group is shown for both males and females. Most developing countries have a population pyramid triangular in shape, indicating a very young population with few people in the oldest age groups. Most developed countries have a population pyramid that looks more rectangular with the young and middle-aged people representing similar and smaller percentages of the population, and more elderly people in the top part of the pyramid.

Premature Mortality Rate

Calculated as the number of deaths among residents under the age of 75 years, in a five-year period, per 1,000 residents under the age of 75 years in the same time period. The rates were age- and sex-adjusted to the overall Manitoba population. The Vital Statistics death records were used to count deaths.

GLOSSARY

Pregnancy Rate

Calculated using data from hospital records by taking the ratio of all live and still births, abortions and ectopic pregnancies for females ages 15 to 49 to the female population ages 15 to 49.

The denominator was female residents ages 15 to 49 as of June 1st. Rates were age- and sex- adjusted to the Manitoba female population ages 15 to 49.

Pregnancy was defined as follows:

- A hospitalization for one of the following diagnoses:
  - Live birth:
    - ICD10 - Z37, ICD9 – V27
  - Missed Abortion:
    - ICD10 – O02.1, ICD9 - 632
  - Ectopic Pregnancy:
    - ICD10 – O00, ICD9 – 633
  - Abortion (spontaneous or medical):
    - ICD10 – O03, O04, O05, O06, O07
    - ICD9 – 634, 635, 636, 637
  - Intrauterine death:
    - ICD10 – O36.4, ICD9- 656.4

- OR –

- A Hospitalization with one of the following procedures:
  - Surgical Termination of Pregnancy:
    - CCI – 5.CA.89, 5.CA.90, ICD9 - 69.01, 69.51, 74.91
  - Surgical Removal of extra-uterine (ectopic) pregnancy:
    - CCI – 5.CA.93, ICD9 – 66.62, 74
  - Pharmacological Termination of Pregnancy:
    - CCI – 5.CA.88, ICD9 - 75.0
  - Interventions during labour and delivery:
    - CCI – 5.MD.5, 5.MD.60, ICD9—74

Regional Health Authority (RHA)

Manitoba's health care system is a broad network of services and programs. Overseeing this system is Manitoba Health, Seniors and Active Living, a department of the provincial government. For the most

part, the actual services are delivered through local regional health authorities - five regional agencies set up by the province to meet the local needs of Manitobans. As of April of 2013, the RHAs were Winnipeg Health Region, Southern Health/Santé Sud, Interlake-Eastern RHA, Prairie Mountain Health and Northern Health Region.

In Manitoba, the regional health authorities are responsible, within the context of broad provincial policy direction, for assessing and prioritizing needs and health goals, and developing and managing an integrated approach to their own health care system.

The Regional Health Authorities Act legislation came into force in 1997. It sets out the conditions under which the RHAs are incorporated, as well as defining duties and responsibilities of the RHAs and the Minister of Health. Both parties are responsible for policy, assessment of health status and ensuring effective health planning and delivery.

Indicators in this report, unless otherwise indicated, are presented by RHA of residence. In other words, indicators reflect where people live, not where they received services.

Schizophrenia Prevalence Rate

The proportion of residents age 10 or older diagnosed with schizophrenia, in a five-year period, by any of the following:

- one or more hospitalizations with a diagnosis for schizophrenia, ICD-9-CM code 295; ICD-10-CA codes F20, F21, F23.2, F25
- one or more physician visits with a diagnosis for schizophrenia, ICD-9-CM code 295.

The proportion was age- and sex-adjusted to the Manitoba population age 10 or older.

Self-Inflicted Injury Hospitalization Rate

The number of hospital separations of residents age 10 or older for which any self-inflicted injury code was included as one of the diagnoses per 1,000 residents age 10 or older. The denominator was residents age 10 or older as of June 1st. Rates were age- and sex-adjusted to the Manitoba population age 10 or older.

Hospitalizations were defined as any inpatient stay with a self-inflicted external cause of injury diagnosis code, ICD-9-CM codes E950-E959; ICD-10-CA codes X60-X84.

Size for Gestational Age

Size for gestational age is a measure of fetal growth. Birth weight and gestational age were taken from the Vital Statistics birth records . Size for gestational age is classified as follows:

- Small-for-Gestational-Age: Infants that are at or below the 10th percentile in birth weight, from an infant population of the same sex and gestational age.

- Large-for-Gestational-Age: Infants that are at or above the 90th percentile in birth weight, from an infant population of the same sex and gestational age.
- Appropriate-for-Gestational-Age: A birth is considered to be appropriate for gestational age if the birth weight is between the 10th and 90th percentiles for the infant's gestational age and sex.

Stroke Rate

Calculated as the number of hospitalizations or deaths due to stroke in residents age 40 or older per 1,000 residents age 40 or older. The denominator was residents age 40 or older as of June 1st. Rates were age- and sex-adjusted to the Manitoba population age 40 or older. Stroke is defined by ICD-9-CM codes 431, 434, 436 or ICD-10-CA codes I61, I63, I64 in the most responsible diagnosis field for hospitalization or as the cause of death in Vital Statistics death files. This definition will not capture minor strokes which did not result in hospitalization or death.

Substance Abuse Prevalence Rate

The proportion of residents age 10 or older diagnosed with substance abuse in a five-year period, by any of the following:

- one or more hospitalizations with a diagnosis for alcoholic or drug psychoses, alcohol or drug dependence or nondependent abuse of drugs, ICD-9-CM code 291, 292, 303, 304, 305; ICD-10-CA codes F10-F19, F55
- one or more physician visits with a diagnosis for alcoholic or drug psychoses, alcohol or drug dependence or nondependent abuse of drugs, ICD-9-CM code 291, 292, 303, 304, 305.

The proportion was age- and sex-adjusted to the Manitoba population age 10 or older.

Suicide Rate

The number of deaths due to suicide among residents age 10 or older, in a five-year period, per 1,000 residents. The denominator was residents age 10 or older per year. Rates were age- and sex-adjusted to the Manitoba population age 10 or older. Suicides were defined as any death record in Vital Statistics data with any of the following causes:

- accidental poisoning, ICD-9-CM codes E850-E854, E858, E862, E868; ICD-10-CA codes X40-X42, X46, X47
- poisoning with undetermined intent, ICD-10-CA codes Y10-Y12, Y16, Y17
- self-inflicted poisoning, ICD-9-CM codes E950-E952; ICD-10-CA codes X60-X69
- self-inflicted injury by hanging, strangulation and suffocation, ICD-9-CM code E953; ICD-10-CA code X70
- self-inflicted injury by drowning, ICD-9-CM code E954; ICD-10-CA code X71

- self-inflicted injury by firearms and explosives, ICD-9-CM code E955; ICD-10-CA codes X72-X75
- self-inflicted injury by smoke, fire, flames, steam, hot vapours and hot objects, ICD-9-CM codes E958.1, E958.2; ICD-10-CA codes X76, X77
- self-inflicted injury by cutting or piercing instruments, ICD-9-CM code E956; ICD-10-CA codes X78, X79
- self-inflicted injury by jumping from high places, ICD-9-CM code E957; ICD-10-CA code X80
- self-inflicted injury by jumping or lying before a moving object, ICD-9-CM code E958.0; ICD-10-CA code X81
- self-inflicted injury by crashing a motor vehicle, ICD-9-CM code E958.5; ICD-10-CA code X82
- self-inflicted injury by other and unspecified means, ICD-9-CM codes E958.3, E958.4, E958.6-E958.9; ICD-10-CA codes X83, X84
- late effects of self-inflicted injury, ICD-9-CM code E959

Vaginal Birth After Caesarean Section Rate

The proportion of female residents ages 15 to 54 giving birth vaginally, in a five-year period, who had previously had at least one delivery by caesarean section. The denominator was female residents ages 15 to 54 delivering in the same time period who had at least one previous caesarean section delivery. A woman is determined to have experienced a delivery after C-section if each of the following criteria is met using hospital abstract data:

1. Presence of a uterine scar from previous surgery (ICD-9-CM diagnosis code of 654.2 or ICD-10 code of O34.201, O34.203, O34.209, O34.291, O34.293, O34,299 or O75.701, O75.703, O75.709)
2. Any single ICD-9-CM or ICD-10 diagnoses code indicating a delivery.

ICD-9-CM
V27.0, V27.2, V27.3, V27.5, or V27.6, in any position

ICD-10 -CA
O1, O2, O4, O6, O7, O8, O9, O30-O35, O37, O36.0, O36.1, O36.2, O36.3, O36.5, O36.6, O36.7, O36.8, O36.9 and with a sixth digit of '1' or '2'; Z37.0, Z37.2, Z37.3, Z37.5, or Z37.6, in any position

To obtain the numerator, all women who had caesarean section deliveries in the current fiscal year are removed from the denominator pool. Caesarean section deliveries are identified by ICD-9-CM procedure codes 74.0, 74.1, 74.2, 74.4, or 74.99 or CCI procedure code 5.MD.60 in any position.

The percent is age-adjusted to the Manitoba female population ages 15 to 54.

Vital Statistics Database

Birth Database:

The central Vital Statistics Registry in each province and territory provides data from birth registrations to Statistics Canada. The following data items are reported for each birth by all provinces and territories for inclusion in the Canadian Vital Statistics system:

- Date and place of birth
- Child's sex, birth weight and gestational age
- Parent's age, marital status and birthplace
- Mother's place of residence
- Type of birth (single or multiple)

Death Database:

The central Vital Statistics Registry in each province and territory provides data from death certificates to Statistics Canada. The following data items are reported for each death by all provinces and territories for inclusion in the Canadian Vital Statistics system:

- Age, sex, marital status, place of residence and birth place of the deceased
- Date of death
- Underlying cause of death classified to the "World Health Organization International Classification of Disease and Related Health Problems" (ICD)
- Province or territory of occurrence of death
- Place of accident
- Autopsy information